

December 20, 2011

**VIA ELECTRONIC FILING**  
**HAND DELIVERED CONFIDENTIAL VERSION**

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Public Service Commission of South Carolina  
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**Re: Duke Energy Carolinas, LLC Application for Approval of Rider 3**  
**Docket No. 2011-420-E**

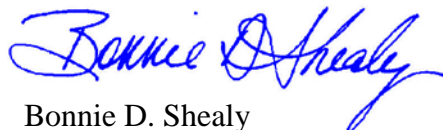
Dear Ms. Boyd:

Enclosed for filing please find Duke Energy Carolinas, LLC's Revised Application for Approval of Rider 3. The Company recently discovered that there was an error in the Energy Efficiency table on page 3. The Revised Application makes non-substantive changes to correct several scrivener's errors in the initial application filed on October 11, 2011. None of the formulas, calculations or numbers have changed. Changes are highlighted and a summary of changes is attached as Exhibit D.

The Company is hand delivering a Confidential Version of the Revised Application that includes Revised Exhibit C. The Commission granted Confidential Treatment of Exhibit C in Order No. 2011-786 on October 26, 2011. The Confidential Version of the Application including Exhibit C is being provided to the Office of Regulatory Staff pursuant to the terms of the May 19, 2011, Confidentiality Agreement between Duke Energy Carolinas and the Office of Regulatory Staff and being provided to the Commission under seal. Should you have any questions, please contact me.

Very truly yours,

ROBINSON, MCFADDEN & MOORE, P.C.

  
Bonnie D. Shealy

/bds

Enclosure

cc/enc: Shannon Hudson, Esquire (via email & Hand Delivery – confidential version)  
Timika Shafeek-Horton, Deputy General Counsel (via email)  
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**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

**Docket No. 2011-420-E**

**PUBLIC VERSION**

In re:	)	
	)	
Application of Duke Energy Carolinas, LLC	)	<b>DUKE ENERGY CAROLINAS,</b>
For Approval of Rider 3	)	<b>LLC’S REVISED APPLICATION</b>
	)	<b>FOR APPROVAL OF RIDER 3</b>
	)	

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Duke Energy Carolinas, LLC (“the Company or Duke Energy Carolinas”) respectfully requests that the Public Service Commission of South Carolina (“Commission”) approve its revised application for Rider 3 to recover estimated costs related to Vintage 3 and the second year of estimated lost revenues related to Vintage 2, and to collect additional amounts due related to the true-up of Vintage 1 in accordance with the modified Save-A-Watt cost recovery mechanism approved in Order Number 2010-79, Docket No. 2009-226-E (“Revised Application”). The proposed Rider 3 also includes a component to recover South Carolina’s retail share of program costs associated with the Company’s Interruptible Service and Stand-By Generation programs (“Existing DSM Programs”)<sup>1</sup>. The Revised Application makes non-substantive changes to correct several scrivener’s errors in the initial application filed on October 11, 2011. None of the formulas, calculations or numbers have changed. In subsequent pages changes from the initial application are highlighted. A summary of the changes from the initial application is attached as **Exhibit D**.

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<sup>1</sup> Order No. 2010-79, p. 17 & 66.

## **BACKGROUND**

1. A modified Save-A Watt cost recovery mechanism for energy efficiency and demand side management programs was approved by the Commission in Order No. 2010-79, Docket No. 2009-226-E. The compensation model provided that the revenue requirements for Duke Energy Carolinas' energy efficiency ("EE") and demand side management ("DSM") programs recover (a) 75% of the Company's annual avoided capacity costs savings applicable to DSM programs, (b) 55% of the net present value ("NPV") avoided energy and capacity costs applicable to EE programs, and (c) lost revenues for EE programs only.<sup>2</sup> Duke Energy Carolinas recovers its program costs for the Existing DSM Programs as a separate component of the proposed Rider 3.<sup>3</sup>

2. The Company's Save-A-Watt recovery mechanism also employs a vintage year concept where a vintage year is defined to be the period in which a specific DSM or EE measure is installed for an individual participant or a group of participants. For EE programs, customers may decide each year whether they will enroll (or re-enroll) in the Company's portfolio of EE programs for each successive vintage year. In this application, the proposed Rider 3 includes revenue requirements from Vintages 1, 2, and 3.<sup>4</sup> Vintage 1 covers the period of February 1, 2010 through December 31, 2010. Vintage 2 covers January 1, 2011 through December 31, 2011. Vintage 3 covers January 1, 2012 through December 31, 2012.

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<sup>2</sup> Order 2010-79, p. 67.

<sup>3</sup> Order No. 2010-79, p. 17 & 66.

<sup>4</sup> Vintage 0 revenue requirements covering the period of June 1, 2009, through January 31, 2010, are addressed in a separate application.

3. The Commission approved Rider EE Vintage Year 1 in Order No. 2010-79.<sup>5</sup> In Order No. 2010-853, Docket No. 2010-299-E, the Commission approved Rider EE Vintage 2 for Vintage Year 2; and a rider that allowed the Company to recover the second year of Vintage 1 lost revenues for non-residential energy efficiency participants.<sup>6</sup>

4. Following are the approved rates for Rider EE Vintage 1 and Vintage 2:

	<b>Vintage 1 (cents/KWh)</b>	<b>Vintage 2 (cents/KWh)</b>
Residential Rider EE	0.1736	0.2697
Non-Residential Rider EE	0.0195	0.0401
Non-Residential Rider DSM	0.0360	0.0596

In Order No. 2010-853, the Commission also approved a rider of 0.0011 cents/KWh to recover the second year of Vintage 1 lost revenues for non-residential energy efficiency participants.<sup>7</sup>

### **RIDER 3 REQUEST**

5. The revenues Duke Energy Carolinas proposes to recover under the proposed Rider 3 follow:

- \$20,732,726 for Residential Customers<sup>8</sup> and
- \$14,696,700 for Non-Residential Customers.<sup>9</sup>

6. For Rider 3, the billing factors were separated to reflect customer participation in EE programs, DSM programs, or both EE and DSM programs. The proposed Rider 3 billing factors include prospective and true-up components.<sup>10</sup> Based on

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<sup>5</sup> Order No. 2010-79, p. 69 & 74.

<sup>6</sup> Order No. 2010-853, p. 1.

<sup>7</sup> Order No. 2010-853, p. 2.

<sup>8</sup> Revised Exhibit B, Residential line 3.

<sup>9</sup> Revised Exhibit B, Non-Residential Billing Factors. See also Revised Exhibit 1 and Revised Exhibit 9.

<sup>10</sup> Revised Exhibit 9 and Revised Exhibit 1.

the total costs to be recovered under the proposed Rider 3, the billing factors applicable to South Carolina customers for the billing period January 1, 2012, through December 31, 2012, would be as follows:

<b>Residential Billing Factors</b>	<b>¢ / kWh</b>
Residential Billing Factor for Rider 3 <b>True-Up Component (Vintage 1)</b>	0.0857 <sup>11</sup>
Residential Billing Factors for Rider 3 <b>Prospective Component</b>	0.2284 <sup>12</sup>
<b>Residential Rider 3 (Total)</b>	0.3141 <sup>13</sup>

<b>Non-Residential Billing Factors for Rider 3 Prospective Components</b>	<b>¢ / kWh</b>
Vintage 1 EE Participant	0.0006 <sup>14</sup>
Vintage 2 EE Participant	0.0052 <sup>15</sup>
Vintage 3 EE Participant	0.0495 <sup>16</sup>
Vintage 3 DSM Participant	0.0742 <sup>17</sup>

<b>Non-Residential Billing Factors for Rider 3 True-Up Component (Vintage 1)</b>	<b>¢ / kWh</b>
Vintage 1 EE Participant	0.0187 <sup>18</sup>
Vintage 1 DSM Participant	0.0140 <sup>19</sup>

The proposed tariff sheet for Rider 3 is attached as **Exhibit A**. A summary of the calculations used to determine these billing factors and the revenue requirements for Rider 3 is attached as **Revised Exhibit B**. The supporting calculations for **Revised**

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<sup>11</sup> **Revised** Exhibit 1, Line 15.  
<sup>12</sup> **Revised** Exhibit 9, Residential Line **11**.  
<sup>13</sup> **Revised** Exhibit B, Residential Line 5.  
<sup>14</sup> **Revised** Exhibit B, Non-Residential Line 3  
<sup>15</sup> **Revised** Exhibit B, Non-Residential Line 6.  
<sup>16</sup> **Revised** Exhibit B, Non-Residential Line 9.  
<sup>17</sup> **Revised** Exhibit B, Non-Residential Line 12.  
<sup>18</sup> **Revised** Exhibit B, Non-Residential Line 15.  
<sup>19</sup> **Revised** Exhibit B, Non-Residential Line 18.

**Exhibit B** for Vintage 1 are attached as **Exhibits 1** through **8** and for Vintages 2 and 3 are **Exhibits 9** through **14**.

7. Attached as **Exhibit C** is *Duke Energy Carolinas EE and DSM Vintage 1 Program Overview*, which provides a description of each program offered during Vintage 1. It also includes updates on the performance of the EE and DSM programs for Vintage 1.

### **RIDER 3 CALCULATION**

8. The Rider 3 calculation allows Duke Energy Carolinas to recover the cost of its Save-A-Watt EE and DSM programs for programs implemented over a four year period. Rider 3 includes components to recover revenue requirements related to DSM and EE programs implemented in Vintage 3, lost revenues resulting from the EE programs, and includes a true-up of Vintage 1. Lost revenues associated with each Vintage year are recovered for 3 years. **Exhibit A.**

9. Revenue requirements for Save-A-Watt DSM programs are determined on a system basis and allocated to South Carolina retail customers based on the class contribution to system retail peak demand. Revenue requirements for Save-A-Watt EE programs were determined on a system basis and allocated to all South Carolina retail customer classes based on South Carolina retail contribution to system retail sales. Residential customers pay for the allocated cost of residential programs and non-residential customers pay for the allocated share of non-residential programs. The cost of the Existing DSM Programs is recovered based on the cost of bill credits and amounts paid to customers participating in these programs. Revenue requirements for Existing

DSM Programs are determined on a system basis and allocated to South Carolina retail customer classes based on the class contribution to system peak demand.<sup>20</sup> The allocation factors used to determine South Carolina's portion of avoided costs for Vintage 1 are provided in **Revised Exhibit 4** and for Vintage 3 in **Exhibit 13**.

10. Avoided energy and capacity costs (per MWH and per MW-Year, respectively) remain fixed until the evaluation, measurement, and verification ("EM&V") true-ups occur.<sup>21</sup> Vintage Year 3 includes the mid-term EM&V true-up process that incorporates the most recent available EMV results.<sup>22</sup> The avoided cost revenue requirements were updated to reflect current information related to participation and the EM&V results for certain EE and DSM programs being offered in Vintage 3.<sup>23</sup> The Company is in the process of testing its DSM programs to verify the MW reductions available. While current estimates show the Company can achieve approximately 500 MW's of reduction from non-residential programs, Duke Energy Carolinas is in the process of performing EM&V on its residential DSM program to validate the MW reductions. However, due to the complexity of this EM&V, results will not be available until the end of 2011.

11. The proposed Rider 3 billing factors are based on the method approved by the Commission in Order No. 2010-79. The formula is designed to provide Duke Energy Carolinas with jurisdictional revenues to recover avoided energy and capacity costs and lost revenues and includes an earnings cap provision. Existing DSM Programs are a

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<sup>20</sup> Exhibits 3 and 12.

<sup>21</sup> Order No. 2010-79, p. 17 and Order Exhibit 1, p. 19.

<sup>22</sup> Order No. 2010-79, p. 67-68.

<sup>23</sup> Exhibit 10.

separate component of the proposed Rider 3.<sup>24</sup> The proposed rider also reflects the opt-out provision for industrial customers.<sup>25</sup> The calculation of each component of Rider 3 is discussed in further detail below.

#### **A. Avoided Costs Component**

12. Load impacts, avoided cost revenue requirements and lost revenues by program were estimated for costs related to Vintage 3 for the period January 1, 2012, through December 31, 2012.<sup>26</sup> They were also examined to true-up Vintage 1 for the period February 1, 2010 through December 31, 2010.<sup>27</sup> The avoided costs revenue requirements were updated to reflect the difference between estimated and actual participation in EE and DSM programs for Vintage 1.<sup>28</sup>

13. Estimated revenues to be collected were based on achieving 85% of the avoided costs savings target through December 31, 2012.<sup>29</sup> The Company chose the 85% billing rate in order to provide a conservative estimate and avoid over-charging customers if the Company was unable to meet its entire avoided cost savings target. Since the industrial customers may opt out of the DSM and/or EE components of Rider EE,<sup>30</sup> the

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<sup>24</sup> Order No. 2010-79, p. 17. Existing DSM Programs' costs are a separate component. Recovery of Existing DSM costs is based on traditional program cost recovery and recovered from all native load customers. Order No. 2010-79, p. 66-67.

<sup>25</sup> Order No. 2010-79, p. 18.

<sup>26</sup> Exhibit 10.

<sup>27</sup> Exhibit 2.

<sup>28</sup> For Vintage 1, the Energy Efficiency Education Program for Schools includes a minor calculation error the effect of which is to over-state slightly the participation in that program for the Vintage 1 period. The Company will address this issue and provide an adjustment to the Residential EE rate in the Vintage 4 filing in 2012.

<sup>29</sup> Revised Exhibit 9, Lines 6, 16, and 19.

<sup>30</sup> Order No. 2010-79, p. 68-69.



total non-residential revenue requirement reflects the elections made by eligible customers not to participate in Vintages 1, 2 or 3.<sup>31</sup>

14. The Company estimated participation results and the associated kW and kWh reductions for each EE and DSM program or measure to be offered during Vintage 3.<sup>32</sup> Based on estimated participation and kW and kWh savings to be achieved during Vintage 3, and the fixed avoided cost per MWh and MW-Year, the Company calculated the avoided cost revenue requirements for residential and non-residential customers.<sup>33</sup> Projected South Carolina retail kWh sales used in the rate per kWh computation were updated to reflect the Summer 2011 sales forecast and estimated impacts of opt-out elections.<sup>34</sup>

#### **B. Lost Revenue Component**

15. Lost revenues are calculated on a state-specific basis because they reflect the under-collection of state-specific costs. The calculation of lost revenues by programs is provided in **Revised Exhibit 11**. Duke Energy Carolinas will collect 36 months of lost revenues associated with Vintage 3 participation to the extent that such amounts would not be recovered through base rates proposed in the Company's base rate case to be filed in August in Docket No. 2011-271-E.

16. Lost revenues associated with Vintages 1, 2, and 3 were calculated for the period of January 1, 2012 through December 31, 2012, and have been incorporated into the Rider 3 revenue requirements. Lost revenues were updated<sup>35</sup> to reflect current SC

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<sup>31</sup> Vintage 2 opt-out impacts are used to estimate Vintage 3 participation because the enrollment period for Vintage 3 has not yet occurred.

<sup>32</sup> Exhibit 10.

<sup>33</sup> **Revised** Exhibit 9.

<sup>34</sup> **Revised** Exhibit 5 & Exhibit 14.

<sup>35</sup> **Revised** Exhibit 11.

retail rates and to reflect the primary rate schedules for which kWh savings are being achieved. The update includes lost revenues for one month for Vintage 1, lost revenues for the second year of Vintage 2, and lost revenues for the first year of Vintage 3.

### **C. Mid-Term True-Up**

17. The mid-term true-up incorporates the most recent available EM&V results to update assumptions and to revise planned spending, savings, and projected revenue and projected kW and kWh impacts. The mid-term results are used to determine future Rider EE amounts for billing remaining Save-A-Watt vintages. Duke Energy Carolinas included measure-level savings adjustments and net-to-gross analysis in the mid-term true-up. The mid-term true-up incorporates the latest, finalized EM&V results in the avoided cost true-up, the lost revenue true-up, and the earnings cap true-up. The final EM&V true-up in year 6 will incorporate all EM&V studies on a net-to-gross results and measure-level savings completed since the mid-term true-up.<sup>36</sup>

18. Duke Energy Carolinas calculated the Vintage 1 True-Up of avoided costs, kW and kWh impacts,<sup>37</sup> lost revenues,<sup>38</sup> and billing factors<sup>39</sup> using actual participation and any EM&V results applicable to Vintage 1. The Vintage 1 True-Up compares collected revenues<sup>40</sup> using estimated participation to the earned revenue requirements using actual participation and EM&V as applicable. Duke Energy Carolinas applied EM&V results prospectively, since no EM&V results were received during Vintage 1. The original kW and kWh impacts per measure were used along with actual participation to compute earned revenue requirements. Information on the actual program

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<sup>36</sup> Order No. 2010-79, p. 67-68 & Order Exhibit 1, p. 20.

<sup>37</sup> Exhibit 2.

<sup>38</sup> Exhibit 2.

<sup>39</sup> Exhibit 2.

<sup>40</sup> Exhibit 8.

costs for Vintage 1 is provided in **Exhibit 7**. In Rider 3, over/under collection for Vintage 1 is accounted for through the Vintage 1 True-up.<sup>41</sup>

19. The Company will use EM&V to update the estimated impacts from the first vintage of programs. Initial EM&V results shall be applied retrospectively to program impacts that were based upon estimates derived from industry standards. Accordingly, in its Vintage 4 application in 2012 for all EE programs, with the exception of Non-Residential SmartSaver Custom Rebate Program and Low Income Energy Efficiency and Weatherization Assistance Program, EM&V results shall be applied retrospectively to the beginning of the program offering. Subsequent EM&V results, if any, will then be applied prospectively, superseding older EM&V results as of the first day of the month immediately following the month in which the study participation sample for the EM&V was completed.

20. This true up process will not apply to the Non-Residential SmartSaver Custom Program because the EM&V process for this program is fundamentally different than other EE programs. This program offers custom energy efficiency measures that are not readily available or have not yet been evaluated by the Company. As such, each project and impact for the Non-Residential SmartSaver Custom Program is unique, requiring a distinct EM&V plan which prevents EM&V from being applied retrospectively to this program. Thus, EM&V for the Non-Residential SmartSaver Custom Program will only be applied on a going-forward basis from the EM&V sample period. Additionally, EM&V will be applied differently for the Low Income Energy Efficiency and Weatherization Assistance Program because the Company did not offer it to its customers. Instead, the State Energy Offices offered similar services to this

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<sup>41</sup> Revised Exhibit 1.

program as part of the American Recovery and Reinvestment Act. Duke Energy Carolinas will therefore likely replace this program with a new Neighborhood Low Income Program. Because this program was not offered to customers there will not be EM&V impact evaluation results to apply retrospectively. As such, once EM&V has been performed on the new Neighborhood Low Income Program, it will be applied retrospectively, beginning with the first day the Neighborhood Low Income Program is approved.

21. Additionally, for all new programs and pilots not offered as part of the Company's original EE and DSM program portfolio, the Company will apply EM&V using initial estimates of impacts until Duke Energy Carolinas has valid EM&V results. The initial EM&V results will then be applied retrospectively to the beginning of the program or pilot. Subsequent EM&V results, if any, will then be applied prospectively, superseding older EM&V results.

22. Duke Energy Carolinas has incorporated EM&V results into the Vintage 3 estimates as part of the mid-term true-up. As new EM&V results become available, they will be utilized until they are superseded by new EM&V results, if any. New EM&V results will be applied for the purposes of truing up vintages as of the first day of the month immediately following the month in which the study participation sample for the EM&V was completed.

23. Revenue requirements were also adjusted according to the earnings cap approved in Order No. 2010-79. Adjustments were made to limit actual revenue requirements for completed vintages to an amount that results in earnings that do not exceed the allowed level. The amount of allowed earnings for Vintage 1 is based upon a

percentage of program costs. The specific percentage is associated with the Company's level of achievement of Save-A-Watt target results. The earnings cap calculation for Vintage 1 compares actual earnings based upon a percentage of program costs to those earned through avoided cost revenues. The earnings cap calculation is provided in **Revised Exhibit 6**.

**E. Calculation of Revenue Requirement and Billing Factors**

24. Based on the results of the programs to date and the Company's latest estimates of future program impacts, Duke Energy Carolinas calculated the residential revenue requirement of \$20,732,726 and the non-residential revenue requirement of \$14,696,700. The revenue requirements were divided by the projected South Carolina sales (kWh) for the rate period to calculate the residential and non-residential billing factors as illustrated in **Revised Exhibit B**.<sup>42</sup>

**CONCLUSION**

Based on the foregoing, the Company respectfully requests that the Commission grant its application seeking approval of Rider 3 as described in its application. Additionally, the Company requests that the Commission allow the proposed rate to be put into effect without notice and hearing pursuant to S.C. Code Ann. Section 58-27-870(F). The proposed rates do not require a determination of the entire rate structure and overall rate of return, and will facilitate an orderly rate administration.

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<sup>42</sup> **Revised** Exhibit 5 and Exhibit 14.

Dated this 20<sup>th</sup> day of December, 2011.

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Attorneys for Duke Energy Carolinas, LLC

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**LIST OF EXHIBITS**

**Exhibit A                      Proposed Tariff Sheet for Rider EE**

**Revised Exhibit B      Summary of Calculations for Rider EE Exhibits and Factors**

<b>Revised Exhibit 1</b>	<b>Vintage 1 True-Up - Calculation of True-Up</b>
<b>Exhibit 2</b>	<b>Vintage 1 True-Up - Load Impacts, Avoided Costs Revenue Requirements and Lost Revenues by Program</b>
<b>Exhibit 3</b>	<b>Vintage 1 True-Up – Existing DSM Program Costs</b>
<b>Revised Exhibit 4</b>	<b>Vintage 1 True-Up – Allocation Factors</b>
<b>Revised Exhibit 5</b>	<b>Vintage 1 True-Up – Forecasted kWh Sales</b>
<b>Revised Exhibit 6</b>	<b>Vintage 1 True-Up - Earnings Cap Calculation</b>
<b>Exhibit 7</b>	<b>Vintage 1 True-Up – Actual Program Costs</b>
<b>Exhibit 8</b>	<b>Vintage 1 True-Up – EE Rider Revenue Collected</b>
<b>Revised Exhibit 9</b>	<b>Vintage 3 – Calculation of Prospective Amount</b>
<b>Exhibit 10</b>	<b>Vintage 3 – Load Impacts, Avoided Costs Revenue Requirements and Lost Revenues by Program</b>
<b>Revised Exhibit 11</b>	<b>Vintage 3 – Lost Revenue</b>
<b>Exhibit 12</b>	<b>Vintage 3 – Existing DSM Program Costs for 2012</b>
<b>Exhibit 13</b>	<b>Vintage 3 – Allocation Factors</b>
<b>Exhibit 14</b>	<b>Vintage 3 – Forecasted kWh Sales</b>

**Exhibit C      Duke Energy Carolinas EE and DSM Vintage 1 Program Overview – revised November 15, 2011**

**Exhibit D -- List of Changes in Revised Application**

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit A**

**Proposed Tariff Sheet for Rider 3**



RIDER EE (SC)  
ENERGY EFFICIENCY RIDER

APPLICABILITY (South Carolina Only)

Service supplied under the Company's rate schedules is subject to approved energy efficiency adjustments over or under the Rate set forth in the approved rate schedules for energy efficiency programs approved by the Public Service Commission of South Carolina (PSCSC).

GENERAL PROVISIONS

This Rider will recover the cost of Duke Energy Carolinas' Save-a-Watt ("SAW") energy efficiency and demand-side management programs, using the method approved by the PSCSC, for programs implemented over a 4 year period (*i.e.*, comprising four 12-month program years or "Vintage Years"). In each year this Rider will include components to recover revenue requirements related to demand-side management and energy efficiency programs implemented in that vintage, as well as lost revenues resulting from the energy efficiency programs. Lost revenues associated with each vintage will be recovered for 36 months upon implementation. As a result the Rider will continue beyond the 4 year period to fully recover lost revenues for programs in years 3 and 4.

Revenue requirements for SAW demand-side management programs will be determined on a system basis and allocated to South Carolina retail customers based on the class contribution to system retail peak demand. Revenue requirements for SAW energy efficiency programs will be determined on a system basis and allocated to all South Carolina retail customer classes based on SC retail contribution to system retail sales. Residential customers will pay for the allocated cost of residential programs; non-residential customers will pay for the allocated cost of non-residential programs.

The Rider will recover the cost of Duke Energy Carolinas' Interruptible Service and Stand-By Generator programs ("Existing DSM Programs") based on the cost of bill credits and amounts paid to customers participating on these programs ("Program Costs"). Revenue requirements will be determined on a system basis and allocated to SC retail customer classes based on the class contribution to system peak demand.

All allocation factors will be based on the Company's cost of service study and will exclude the amounts related to customers that elect to opt out of this Rider.

TRUE-UP PROVISIONS

Rider amounts for SAW programs will initially be determined based on estimated kW and kWh impacts related to expected customer participation in the programs, and will be true-up as actual customer participation and actual kw and kwh impacts are verified.

Participation true-ups: After the first year, the Rider will include a true-up of previous Rider amounts billed to reflect actual customer participation in the programs.

Measurement and verification true-up: EM&V activities and results will be included in a mid-term EM&V-based true-up process that will be reflected in Vintage Year 3 Rider EE collections. A final EM&V true-up reflected in Vintage Year 6 Rider EE collections will incorporate all EM&V studies completed since the mid-term EM&V true-up. EM&V results will include measure-level savings adjustments and net-to-gross analysis. In addition, the mid-term and final true-ups will incorporate the most recent EM&V results in the avoided cost true-up, the lost revenue true-up, and the earnings cap true-up.

Earnings cap true-up: In the sixth year a true up will be billed, if applicable, to refund amounts collected through the Rider in excess of the earnings cap, in accordance with the following levels of achievement and allowed return on investment.

<u>Percentage Actual Target Achievement</u>	<u>Return on Investment Cap on Program Costs Percentage</u>
>=90%	15%
80% to 89%	12%
60% to 79%	9%
< 60%	5%

Rider amounts for Existing DSM Programs initially will be estimated program costs for the calendar year and will be true-up to actual a subsequent rider.

RIDER EE (SC)  
ENERGY EFFICIENCY RIDER

DETERMINATION OF ENERGY EFFICIENCY RIDER ADJUSTMENT

Energy Efficiency Adjustments (EEA) will be applied to the energy (kilowatt hours) billed of all rate schedules for each vintage as determined by the following formula:

EEA Residential (expressed as cents per kwh) = SAW Residential Adjustment + Existing DSM Residential Adjustment

SAW Residential Adjustment = Residential Avoided Cost Revenue Requirement + Residential Lost Revenues / Forecasted Residential kWh Sales for the Rider billing period

Where

Residential Avoided Cost Revenue Requirement = (Residential Demand Side Management Program Avoided Cost Revenue Requirement X 75%) + (Residential Energy Efficiency Program Avoided Cost Revenue Requirement X 55%)

And

Existing DSM Residential Adjustment = Non-SAW Residential Program Costs / Forecasted Residential kWh Sales for the Rider billing period

EEA Non-residential (expressed as cents per kwh) = SAW Non-residential Adjustment + Existing DSM Non-residential Adjustment

SAW Non-residential Adjustment = Non-residential Avoided Cost Revenue Requirement + Non-residential Lost Revenues / Forecasted Non-residential kWh Sales (excluding opt out sales) for the Rider billing period

Where

Non-residential Avoided Cost Revenue Requirement = (Non-residential Demand Side Management Program Avoided Cost Revenue Requirement X 75%) + (Non-residential Energy Efficiency Program Avoided Cost Revenue Requirement X 55%)

And

Existing DSM Non-residential Adjustment = Non-SAW Non-residential Program Costs / Forecasted Non-residential kWh Sales (excluding opt out sales) for the Rider billing period

ENERGY EFFICIENCY RIDER ADJUSTMENTS (EEA)

As a result of the Commission's Order No. \_\_\_\_\_ in Docket No. \_\_\_\_\_ the EEA applicable to the residential and nonresidential rate schedules for the period January 1, 2012 through December 31, 2012, including revenue-related taxes and utility assessments, are as follows:

<u>Residential</u>	0.3141¢ per kWh	
<u>Nonresidential</u>	<u>Energy Efficiency</u>	<u>Demand Side Management</u>
Vintage 1 True-up	0.0187¢ per kWh	0.0140 ¢ per kWh
Vintage 1 Lost Revenues	0.0006¢ per kWh	NA
Vintage 2 Lost Revenues	0.0052¢ per kWh	NA
Vintage 3	0.0495¢ per kWh	0.0742¢ per kWh

Each factor listed under Non-residential is applicable to non-residential customers who are not eligible to opt out and to eligible customer who have not opted out. If a nonresidential customer has opted out of a Vintage(s), then the charge(s) shown above for the Vintage(s) during which the customer has opted out, will not apply to the bill.

OPT OUT PROVISION FOR QUALIFYING MANUFACTURING CUSTOMERS

**RIDER EE (SC)  
ENERGY EFFICIENCY RIDER**

The Nonresidential EEA increment applicable to energy efficiency programs and/or demand-side management programs will not be applied to the energy billed to the Customer under the applicable nonresidential rate schedule for Customers qualified to opt out of the programs where:

- a. The Customer attests or certifies to the Company that it has performed or had performed for it an energy audit or analysis within the three year period preceding the opt out request and has implemented or has plans for implementing the cost-effective energy efficiency measures recommended in that audit or analysis; and
- b. The Customer is served under an electric service agreement where the establishment is classified as a “manufacturing industry” by the Standard Industrial Classification Manual published by the United States Government, and where more than 50% of the electric energy consumption of such establishment is used for its manufacturing processes.

For Customers who elect to opt out of Energy Efficiency Programs, the following provisions also apply:

- Qualifying customers may opt out of the Company’s energy efficiency programs each calendar year only during an annual two month enrollment period beginning January 1 and concluding March 1.
- Customers may not opt out of individual energy efficiency programs offered by the Company. The choice to optout applies to the Company’s entire portfolio of energy efficiency programs.
- If a customer participates in any vintage of energy efficiency programs, the customer, irrespective of future opt-out decisions, remains obligated to pay the remaining portion of the lost revenues for each vintage of efficiency programs in which the customer participated.

For Customers who elect to opt out of Demand Side Management Programs, the following provisions also apply:

- Qualifying customers may make a one-time election for the 4 year plan to opt out of the Company’s demand-side management programs within 60 days after the effective date of new rates and charges approved by the PSCSC in Docket No. 2009-226-E.
- If a customer elects to participate in a demand-side management program, the customer may not subsequently choose to opt out of the program for the remaining term of the 4 year plan.

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Revised Exhibit B**

**Summary of Calculations for  
Rider EE Exhibits and Factors**

Duke Energy Carolinas  
DSM/EE Cost Recovery Rider 3  
Exhibit Summary for Rider EE Exhibits and Factors

Revised Exhibit B

### Residential Billing Factor

1 Costs to be Recovered for Vintage 1 True-up	Exhibit 1, Line 13	\$	5,656,566	
2 Costs to be Recovered for Vintage 3 Prospective Amounts	Exhibit 9, Line 9	\$	15,076,160	
3 Total Costs to be Recovered in Rider 3	Line 1 + Line 2	\$	20,732,726	Application
4 Projected SC Residential Sales (kWh) for rate period	Exhibit 14, Line 10		6,600,286,497	
5 SAW and Existing DSM Program Revenue Requirements Residential Rider EE (cents per kWh)	Line 3 / Line 4		0.3141	Application

### Non-Residential Billing Factors for Rider 3 Prospective Components

1 Total EE Revenue Requirement - Vintage 1 EE Participant	Exhibit 9, Line 17	\$	60,431	
2 Projected Vintage 1 EE Participants SC Non-Residential Sales (kwh) for rate period	Exhibit 14, Line 24		9,745,896,379	
3 SAW EE Revenue Requirement Vintage 1 Lost Revenues <b>Non-Residential Rider EE (cents per kWh)</b>	Line 1 / Line 2		0.0006	Application
4 Total EE Revenue Requirement - Vintage 2 EE Participant	Exhibit 9, Line 17	\$	484,417	
5 Projected Vintage 2 EE Participants SC Non-Residential Sales (kwh) for rate period	Exhibit 14, Line 24		9,345,300,616	
6 SAW EE Revenue Requirement Vintage 2 Lost Revenues <b>Non-Residential Rider EE (cents per kWh)</b>	Line 4 / Line 5		0.0052	Application
7 Total EE Revenue Requirement - Vintage 3 EE Participant	Exhibit 9, Line 17		4,625,858	
8 Projected Vintage 3 EE Participants SC Non-Residential Sales (kwh) for rate period	Exhibit 14, Line 24		9,345,300,616	
9 SAW EE Revenue Requirement Vintage 3 <b>Non-Residential Rider EE (cents per kWh)</b>	Line 7 / Line 8		0.0495	Application
10 Costs to be Recovered DSM Revenue Requirement Vintage 3 DSM Participant	Exhibit 9, Line 22	\$	6,476,892	
11 Projected Vintage 3 DSM Participants SC Non-Residential Sales (kwh) for rate period	Exhibit 14, Line 24		8,732,320,422	
12 SAW and Existing DSM Revenue Requirement Vintage 3 <b>Non-Residential Rider EE (cents per kWh)</b>	Line 10 / Line 11		0.0742	Application

### Non-Residential Billing Factors for Rider 3 True-Up Components (Vintage 1)

13 Costs to be Recovered for Vintage 1 True-up - Vintage 1 EE Participant	Exhibit 1, Line 27	\$	1,821,354	
14 Projected Vintage 1 EE Participants SC Non-Residential Sales (kwh) for rate period	Exhibit 5, Line 24		9,745,896,379	
15 SAW EE Revenue Requirement Vintage 1 True-up <b>Non-Residential Rider EE (cents per kWh)</b>	Line 13 / Line 14		0.0187	Application
16 Costs to be Recovered for Vintage 1 True-up - Vintage 1 DSM Participant	Exhibit 1, Line 27	\$	1,227,748	
17 Projected Vintage 1 DSM Participants SC Non-Residential Sales (kwh) for rate period	Exhibit 5, Line 24		8,759,014,583	
18 SAW and Existing DSM Revenue Requirement Vintage 1 True-up <b>Non-Residential Rider EE (cents per kWh)</b>	Line 16 / Line 17		0.0140	Application

#### Total costs to be recovered in Rider 3 from Non-Residential Customers

1 Total EE Revenue Requirement - Vintage 1 EE Participant	Exhibit 9, Line 17	\$	60,431	
4 Total EE Revenue Requirement - Vintage 2 EE Participant	Exhibit 9, Line 17	\$	484,417	
7 Total EE Revenue Requirement - Vintage 3 EE Participant	Exhibit 9, Line 17	\$	4,625,858	
10 Costs to be Recovered DSM Revenue Requirement Vintage 3 DSM Participant	Exhibit 9, Line 22	\$	6,476,892	
13 Costs to be Recovered for Vintage 1 True-up - Vintage 1 EE Participant	Exhibit 1, Line 27	\$	1,821,354	
16 Costs to be Recovered for Vintage 1 True-up - Vintage 1 DSM Participant	Exhibit 1, Line 27	\$	1,227,748	
		\$	14,696,700	Application

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
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In re:	)	
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Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Revised Exhibit 1**

**Vintage 1 True-Up - Calculation of True-Up**

	A	B	C	D	E	F	G	H	I	J	K
1					Duke Energy Carolinas						V1
2					DSM/EE Vintage 1 True Up for the Period February 1, 2010 to December 31, 2010						Revised Exhibit 1
3					Calculation of True Up (cents per kWh)						
4											
5		<b>RESIDENTIAL</b>									
6											
7		1 EE Avoided Cost Component		Exhibit 2, Col C, Line 6							
8		2 DSM Avoided Cost Component		Exhibit 2, Col C, Line 7							
9		3 Residential Avoided Cost Revenue Requirement		Line 1 + Line 2							
10		4 Total Lost Revenues		Exhibit 2, Col D, Line 6							
11		5 Residential Save-A-Watt Revenue Requirement		Line 3 + Line 4							
12		6 Billing Factor									
13		7 Residential Save-A-Watt Revenue Requirement for Billing		Line 5 * Line 6							
14		8 Residential Existing DSM Program Revenue Requirement		Exhibit 3, Line 3 Res							
15		9 Total Residential SAW & Existing DSM Program Revenue Requirement		Line 7 + Line 8							
16		10 Earnings Cap Adjustment		Exhibit 6, Line 27 Res							
17		11 Residential Revenue Requirement Capped		Line 9 + Line 10							
18		12 Total Residential Rider EE Collections 2010		Exhibit 8, Line 2							
19		13 Residential True-up Amount Vintage 1		Line 11 - Line 12							
20		14 Projected SC Residential Sales (kWh) for rate period		Exhibit 5, Line 10							
21		15 Residential Rider EE (cents per kWh)		(Line 13 / Line 14) * 100							
22											
23											
24											
25		<b>NON-RESIDENTIAL</b>									
26		EE Revenue Requirement:									
27											
28		16 SAW EE Avoided Cost Revenue Requirement		Exhibit 2, Col C, Line 14							
29		17 Lost Revenues Vintage 1		Exhibit 2, Col D, Line 14							
30		18 Billing Factor									
31		19 Total NonResidential EE Revenue Requirement		(Line 16 + Line 17) * Line 18							
32		20 SAW DSM Avoided Cost Component		Exhibit 2, Col C, Line 15							
33		21 Existing DSM Program Revenue Requirement		Exhibit 3, Line 3 Non-Res							
34		22 Billing Factor									
35		23 Total Non-Residential DSM Revenue Requirement		(Line 20 + Line 21) * Line 22							
36		24 Earnings Cap Adjustment		Exhibit 6, Line 27 Non- Res							
37		25 Non-Residential Revenue Requirement Capped		Line 19 + Line 24, Line 23 + Line 24							
38		26 Total Non-Residential Rider EE Collections 2010		Exhibit 8, Line 6 and Line 7							
39		27 Non-Residential True-up Amount Vintage 1		Line 25 - Line 26							
40											
41		28 Projected Vintage 1 EE Participants SC Non-Residential Sales (kWh) for rate period		Exhibit 5, Line 24							
42		29 Projected Vintage 1 DSM Participants SC Non-Residential Sales (kWh) for rate period		Exhibit 5, Line 24							
43		30 Non-Residential Rider EE Amounts (cents per kWh)		(Line 27 / Line 28 EE or Line 29 DSM) * 100							

**BEFORE  
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For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit 2**

**Vintage 1 True-Up - Load Impacts,  
Avoided Costs Revenue Requirements  
and Lost Revenues by Program**



Duke Energy Carolinas

DSM/EE Vintage 1 True Up for the Period February 1, 2010 to December 31, 2010

Load Impact, Costs and Lost Revenues by Program

V1  
Exhibit 2

				A	B	C	D
				System Avoided Cost Revenue Requirement	SC Allocation Factor	SC Residential Avoided Costs	SC Residential Lost Revenues
		System kW - Summer Peak	System Energy Reduction (kWh)		Allocation based on kWh sales	A * B	
Residential Programs							
EE Programs (at 55% Avoided Cost)							
1	Residential Energy Assessments	1,166	8,613,288	\$ 1,248,559	27.21216%	\$ 339,760	\$ 87,501
2	Home Energy Comparison Report	555	2,991,111	\$ 84,422	27.21216%	\$ 22,973	\$ 109,370
3	Smart Saver® for Residential Customers	43,751	464,293,288	\$ 53,480,071	27.21216%	\$ 14,553,082	\$ 2,084,800
4	Low Income Energy Efficiency and Weatherization Assistance	666	7,183,049	\$ 796,966	27.21216%	\$ 216,872	\$ 33,114
5	Energy Efficiency Education Program for Schools	1,158	6,240,039	\$ 949,038	27.21216%	\$ 258,254	\$ 33,092
6	Total for Residential Conservation Programs	47,296	489,320,775	\$ 56,559,056		\$ 15,390,941	\$ 2,347,877
					Allocation based on peak demand <sup>(1)</sup>		
7	Total DSM Programs (at 75% Avoided Cost)	Line 18	482,629	\$ 25,426,704	10.77890%	\$ 2,740,719	
Non-Residential Programs							
EE Programs (at 55% Avoided Cost)							
				System Avoided Cost Revenue Requirement	SC Allocation Factor	SC Non-Resideptial Avoided Costs	SC Non-Residential Lost Revenues
		System kW - Summer Peak	System Energy Reduction (kWh)		Allocation based on kWh sales	A * B	
8	Smart Saver® for Non-Residential Customers Lighting	10,070	40,893,269	\$ 8,708,459	27.21216%	\$ 2,369,760	\$ 297,052
9	Smart Saver® for Non-Residential Customers Motors	591	3,118,075	\$ 933,555	27.21216%	\$ 254,040	\$ 15,507
10	Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	-	434	\$ 55	27.21216%	\$ 15	\$ -
11	Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	161	832,464	\$ 211,435	27.21216%	\$ 57,536	\$ 2,376
12	Smart Saver® for Non-Residential Customers - HVAC	1,672	3,984,941	\$ 1,910,402	27.21216%	\$ 519,862	\$ 18,159
13	Smart Saver® for Non-Residential Customers - Custom Rebate	2,596	20,892,129	\$ 3,651,902	27.21216%	\$ 993,761	\$ 52,100
14	Total for Non-Residential Conservation Programs	15,090	69,721,312	\$ 15,415,808		\$ 4,194,974	\$ 385,194
					Allocation based on peak demand <sup>(1)</sup>		
15	Total DSM Programs (at 75% Avoided Cost)	Line 18	482,629	\$ 25,426,704	14.3449900%	\$ 3,647,458	
DSM Program Breakdown							
				75%	Allocation based on System Retail Peak Demand		
16	Power Manager (Residential)	231,882	-	13,576,883			
17	Power Share (Non-Residential)	250,747	-	11,849,821			
18	Total DSM	482,629		25,426,704	25.12389%	\$ 6,388,177	

(1)Total System DSM programs allocated to Residential and Non-Residential based on contribution to retail system peak.

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
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	)	

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**Exhibit 3**

**Vintage 1 True-Up – Existing DSM Program Costs**

**Duke Energy Carolinas**  
**DSM/EE Vintage 1 True Up for the Period February 1, 2010 to December 31, 2010**  
**Existing DSM Program Costs**

**V1**  
**Exhibit 3**

		Year 2010	
1 Estimated total IS/SG credits to be paid for native load programs	Line 8	\$ 8,977,844	
		Residential	Non-residential
2 SC retail allocation factor - system peak demand	Exhibit 11, Col D, Lines 6 and 7	10.18483%	13.55438%
3 SC retail share IS/SG program costs	Line 1 * Line 2	\$ 914,378	\$ 1,216,891

<b>PROGRAM</b>	<b>Feb - Dec 2010 Credits Paid</b>
4 INTERRUPTIBLE SERVICE CREDITS	5,551,645
5 STANDBY GENERATOR PAYMENTS	2,061,639
6 WHOLESALE A/C LOAD CONTROL CREDITS	614,944
7 WHOLESALE INTERRUPTIBLE SERVICE CREDITS	749,616
<b>8 TOTAL CREDITS</b>	<b>8,977,844</b>

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC’S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Revised Exhibit 4**

**Vintage 1 True-Up – Allocation Factors**

**Duke Energy Carolinas**  
**DSM/EE Vintage 1 True Up February 1, 2010 - December 31, 2010**  
**Allocation Factors**

**V1**  
**Revised Exhibit 4**

**SAW Sales Allocator**

		<b>A</b>	<b>B</b>	<b>C</b>
		MWH	SC Retail % (1)	SC Retail Res/Non Res% (2)
1 NC Retail MWH Sales Allocation	2010 COS Study	57,382,346		
2 SC Retail MWH Sales Allocation Residential	2010 COS Study	7,148,319		33.28438%
3 SC Retail MWH Sales Allocation Non-Residential	2010 COS Study	14,328,176		66.71562%
4 SC Retail MWH Sales Allocation	2010 COS Study	21,476,495	27.21216%	
5 Greenwood Retail MWH Sales Allocation	2010 COS Study	63,588		
6 Total Retail	Sum Lines 1 through 3 + Line 5	78,922,429		

(1) Col. A Line 4 / Line 6

(2) Col. A Line 2 or 3/ Line 4

**Demand Allocators**

		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
		MW	SC Retail Res / NonRes % for SAW (1)	SC Retail % (2)	SC Retail Res / NonRes % for Existing DSM (3)	Res vs. NonRes Split (4)
7 NC Peak Demand	2010 COS Study	11,932,643				
8 SC Residential Peak Demand	2010 COS Study	1,719,773	10.77890%		10.18483%	42.90299%
9 SC Non-Residential Peak Demand	2010 COS Study	2,288,743	14.34499%	25.12389%	13.55438%	57.09701%
10 Greenwood Peak Demand	2010 COS Study	13,841				
11 Total Retail Peak Demand	Sum Lines 5 through 8	15,955,000				
12 Wholesale Peak Demand	2010 COS Study	930,640				
13 Total System Peak Demand	Line 9 + Line 10	16,885,640				

(1) Col. A, Line 8 or 9/ Line 11

(2) Col B Line 8 + Line 9

(3) Col A Line 8 or 9 / Line 13

(4) Col B, Line 8 or 9 / Col C, Line 9

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC’S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Revised Exhibit 5**

**Vintage 1 True-Up – Forecasted kWh Sales**

Duke Energy Carolinas  
DSM/EE Vintage 1 True Up for the Period February 1, 2010 to December 31, 2010  
Forecasted kWh Sales for Rate Period

V1  
Revised Exhibit 5

	Total 2012	Jan_12	Feb_12	Mar_12	Apr_12	May_12	Jun_12	Jul_12	Aug_12	Sep_12	Oct_12	Nov_12	Dec_12
<b>Fall 2010 Sales Forecast - kWhs</b>													
<b>South Carolina Retail:</b>													
1 Residential	6,648,984,059	698,153,386	625,553,570	521,089,853	439,681,932	419,404,729	535,238,823	647,394,210	680,354,494	625,031,806	435,193,207	424,117,677	597,770,373
2 General	5,929,276,816	477,414,091	462,475,453	435,926,435	449,673,137	462,620,570	529,608,857	561,663,599	577,743,776	574,804,546	488,575,032	447,456,480	461,314,838
3 Industrial	7,573,258,886	584,533,085	632,580,859	567,701,002	634,996,695	631,689,309	662,193,705	641,612,861	687,498,896	678,809,328	620,860,227	646,652,644	584,130,275
4 Textile	1,114,936,694	85,596,007	97,684,173	85,840,144	97,083,400	98,928,936	99,433,115	88,637,106	105,485,112	98,975,267	88,664,753	90,379,978	78,228,702
5 Other	44,556,913	3,738,639	3,688,697	3,684,305	3,694,165	3,690,877	3,740,394	3,672,293	3,777,079	3,721,110	3,541,657	3,871,445	3,736,253
6 Total Non-Residential	14,662,029,308	1,151,281,822	1,196,429,181	1,093,151,885	1,185,447,398	1,196,929,693	1,294,976,071	1,295,585,860	1,374,504,863	1,356,310,251	1,201,641,669	1,188,360,547	1,127,410,068
7 Total Retail	21,311,013,368	1,849,435,208	1,821,982,751	1,614,241,738	1,625,129,330	1,616,334,421	1,830,214,894	1,942,980,070	2,054,859,356	1,981,342,058	1,636,834,877	1,612,478,224	1,725,180,440

**Adjusted SC Retail Sales Forecast (excludes Greenwood sales)**

8 Residential	6,648,984,059	
9 Factor to exclude Greenwood	99.2676%	Line 27
10 Residential sales excl GW	6,600,286,497	
11 Non-Residential	14,662,029,308	
12 Factor to exclude Greenwood	99.9244%	Line 30
13 Non-Residential sales excl GW	14,650,937,965	

**Opt Out Sales**

	2010 kWh Usage
Vintage 1 Opt Out	
14 DSM YR1	5,891,923,382
15 EE YR1	4,905,041,586
Vintage 2 Opt Out	
16 DSM YR2	5,918,617,543
17 EE YR2	5,305,637,349
18 Vintage 3 Opt Out	Use V2 as estimate

**Non-Residential Forecast Sales Less Opt Out**

	V1 EE Rate Components	V1 DSM Rate Components	V2 and V3 EE Rate Components <sup>(1)</sup>	V3 DSM Rate Components <sup>(1)</sup>
19 Total Non-Residential	14,650,937,965	14,650,937,965	14,650,937,965	14,650,937,965
20 Less V1 EE Opt Out	4,905,041,586			
21 Less V1 DSM Opt Out		5,891,923,382		
22 Less V2 EE Opt Out			5,305,637,349	
23 Less V2 DSM Opt Out				5,918,617,543
24 Sales for Rider Calculation	<b>9,745,896,379</b>	<b>8,759,014,583</b>	9,345,300,616	8,732,320,422

**FACTOR TO EXCLUDE GREENWOOD SALES FROM FORECAST:**

	2010 MWH	Percent to Total
25 Total SC Residential sales	7,201,060	
26 Greenwood residential sales	52,741	
27 SC Residential excl GW	7,148,319	99.2676% Line 27 / Line 25
28 Total SC Non-Residential sales	14,339,023	
29 Greenwood non-residential sales	10,847	
30 SC Non-Residential excl GW	14,328,176	99.9244% Line 30 / Line 28
31 Total SC Retail Sales	21,540,083	
32 Greenwood sales	63,588	
33 Total SC Sales excl GW	21,476,495	

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**

In re:	)	
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Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Revised Exhibit 6**

**Vintage 1 True-Up - Earnings Cap Calculation**



**V1**  
**Revised Exhibit 6**

Total for SAW Programs Adjusted for DSM Cap		Res	Non Res	Total
13 AC Revenues	Line 1 + Line 7	\$ 70,135,939	\$ 27,265,629	\$ 97,401,568
14 Program Costs	Line 2 + Line 8	\$ 36,920,092	\$ 19,006,142	\$ 55,926,234
15 Avoided Costs	Line 3 + Line 9	\$ 120,937,158	\$ 43,828,503	\$ 164,765,661
16 Income Before Taxes	Line 13 - Line 14	\$ 33,215,847	\$ 8,259,487	\$ 41,475,334
17 Income Taxes	Line 16 * .39176	\$ 13,012,640	\$ 3,235,737	\$ 16,248,377
18 Net Income	Line 16 - Line 17	\$ 20,203,207	\$ 5,023,750	\$ 25,226,957
19 Percent DSM Avoided Cost to Total Avoided Cost (A)	Line C9 / Line C15			21%
20 Percent Conservation Avoided Cost to Total Avoided Cost	Line C3 / Line C15			79%
21 Earnings Cap: Allowed Return on Program Costs	Line 14, Col. C * 15%			\$ 8,388,935
22 Earnings in Excess of Allowed Return on Program Costs	Line 18, Col C - Line 21, Col C			\$ 16,838,022
23 SC Allocation (weighted demand and sales allocators)	(Exhibit 2, Line 8 Col B * Line 20) + (Exhibit 2, Line 18 Col B * Line 19)			26.7825%
24 Excess Earnings to reduce V1 Revenue Requirement	Line 22 * Line 23			\$ 4,509,639
25 Excess Earnings by Customer Class and Type	Line 24 * Line 15, Col D, Col E, (Col E * Col F), (Col E * Col G)			
26 Gross Up of Earnings to Pre-Tax	Line 25 / (1- .39176)			
27 Gross up of Pre-Tax Earnings for Gross Receipts Tax and Regulatory Fee	Line 26 * 1.004581			

73%                      27%                      57%                      43%

(A) No Adjustment required since DSM avoided costs percent is less than 40%

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
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In re:	)	
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Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit 7**

**Vintage 1 True-Up – Actual Program Costs**

Duke Energy Carolinas  
DSM/EE Cost Recovery Vintage 1 True Up February 1, 2010 - December 31, 2010  
Actual Program Costs

	A	B	C	D	E	F	
	System Costs Month of February 1, 2010 - December 31, 2010	SC 2010 Allocation Factor Retail kWh Sales	2010 SC Allocated Costs	Residential % (Exh. 4)	Residential	Non-Residential % (Exh. 4)	Non-Residential
Energy Efficiency (EE) Programs:							
1 Residential Energy Assessments	2,411,528		656,229		656,229		
2 Home Energy Comparison Report	17,037		4,636		4,636		
3 Residential Smart Saver	23,688,748		6,446,220		6,446,220		
4 Low Income Services	383,485		104,355		104,355		
5 Energy Efficiency Education Schools Program	1,981,600		539,236		539,236		
6 Nonresidential Energy Assessments	963,622		262,222				262,222
7 Nonresidential Smart Saver	6,013,406		1,636,378				1,636,378
8 Oversight of EE programs	3,567,859		970,891	33.28438%	323,155	66.71562%	647,736
9 Subtotal EE Program Costs	39,027,285	27.21216%	10,620,167		8,073,831		2,546,336
10 Res vs. Non-Res Split			100%		76%		24%
		SC 2010 Allocation Factor Peak Demand					
Demand-Side Management (DSM) Programs:							
11 Power Manager	8,623,054		2,166,447				
12 Power Share	7,059,562		1,773,637				
13 Oversight of DSM programs	1,216,333		305,590				
14 Subtotal DSM Program Costs	16,898,949	25.12389%	4,245,673	42.90299%	1,821,521	57.09701%	2,424,153
15 Res vs. Non-Res Split			100%		43%		57%
16 Total EE & DSM Program Costs	<u>55,926,234</u>		<u>14,865,841</u>		<u>9,895,352</u>		<u>4,970,489</u>
17 Total EE & DSM Program Costs - Vintage 1	<u>55,926,234</u>						

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC’S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit 8**

**Vintage 1 True-Up – EE Rider Revenue Collected**

Duke Energy Carolinas  
DSM/EE Vintage 1 True Up for the Period February 1, 2010 to December 31, 2010  
EE Rider Revenue Collected

V1  
Exhibit 8

	<u>February 2010</u>	<u>March 2010</u>	<u>April 2010</u>	<u>May 2010</u>	<u>June 2010</u>	<u>July 2010</u>	<u>August 2010</u>	<u>September 2010</u>	<u>October 2010</u>	<u>November 2010</u>	<u>December 2010</u>	<u>Total 11 Months</u>
Residential Rider Total Rate *	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	0.1736	
Total Residential Revenue	\$ 524,312.54	\$ 1,043,840.38	\$ 767,083.87	\$ 686,025.78	\$ 993,009.23	\$ 1,323,781.93	\$ 1,285,478.20	\$ 1,128,427.34	\$ 744,564.88	\$ 704,073.25	\$ 1,157,055.17	\$ 10,357,652.57
kwh	302,023,353	601,290,541	441,868,589	395,176,141	572,009,925	762,547,195	740,482,834	650,015,749	428,896,820	405,572,149	666,506,434	5,966,389,729
Non-Residential EE Rate *	0.0195	0.0195	0.0195	0.0195	0.0195	0.0195	0.0195	0.0195	0.0195	0.0195	0.0195	
Non-Residential DSM Rate *	0.0360	0.0360	0.0360	0.0360	0.0360	0.0360	0.0360	0.0360	0.0360	0.0360	0.0360	
Non-Residential EE Revenue	\$ 75,373.12	\$ 177,984.08	\$ 143,849.74	\$ 140,334.14	\$ 165,767.22	\$ 171,228.29	\$ 182,503.10	\$ 175,224.61	\$ 137,498.37	\$ 140,431.53	\$ 147,645.31	\$ 1,657,839.51
Non-Residential DSM Revenue	\$ 136,768.01	\$ 325,716.68	\$ 237,897.79	\$ 234,354.29	\$ 265,383.73	\$ 286,220.41	\$ 298,130.74	\$ 291,379.56	\$ 248,911.72	\$ 229,812.65	\$ 243,239.79	\$ 2,797,815.37
kWh - EE participants	386,528,821	912,738,872	737,690,974	719,662,256	850,088,308	878,093,795	935,913,333	898,587,744	705,119,846	720,161,692	757,155,436	8,501,741,077
kWh - DSM participants	379,911,139	904,768,556	660,827,194	650,984,139	737,177,028	795,056,694	828,140,944	809,387,667	691,421,444	638,368,472	675,666,083	7,771,709,361

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**

In re:	)	
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For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Revised Exhibit 9**

**Vintage 3 – Calculation of Prospective Amount**

**Duke Energy Carolinas**  
**DSM/EE Cost Recovery Rider 3**  
**Calculation of EE Rider 3 Prospective Amounts**

V3  
Revised Exhibit 9

**RESIDENTIAL**

- 1 EE Avoided Cost Component
- 2 DSM Avoided Cost Component
- 3 Residential Avoided Cost Revenue Requirement
- 4 Total Lost Revenues
- 5 Residential Save-A-Watt Revenue Requirement
- 6 Billing Factor
- 7 Residential Save-A-Watt Revenue Requirement for Billing
- 8 Residential Existing DSM Program Revenue Requirement
- 9 Total Residential SAW & Existing DSM Program Revenue Requirement
- 10 Projected SC Residential Sales (kWh) for rate period
- 11 **Residential Rider EE (cents per kWh)**

Exhibit 10, Col F, Line 6  
Exhibit 10, Col F, Line 7  
Line 1 + Line 2  
Exhibit 11, Line 14  
**Line 3 + Line 4**

**Line 5 \* Line 6**  
Exhibit 12, Line 3 Residential  
**Line 7 + Line 8**

Exhibit 14, Line 10  
**(Line 9 / Line 10) \*100**

Vintage 3 SC Retail Costs	Gross Receipts Tax and Regulatory Fee Factor	Vintage 3 SC Retail Revenue Requirement
\$ 3,638,628		
\$ 4,536,426		
\$ 8,175,053	1.004581	8,212,503
		\$ 8,355,751
		16,568,254
		85%
		\$ 14,083,016
\$ 988,615	1.004581	\$ 993,144
		\$ 15,076,160
		6,600,286,497
		0.2284

**NON-RESIDENTIAL**

- 12 SAW EE Avoided Cost Revenue Requirement
- 13 Lost Revenues Vintage 1
- 14 Lost Revenues Vintage 2
- 15 Lost Revenues Vintage 3
- 16 Billing Factor
- 17 Total NonResidential EE Revenue Requirement
- 18 SAW DSM Avoided Cost Component
- 19 Billing Factor
- 20 Total SAW DSM Avoided Cost Component
- 21 Existing DSM Program Revenue Requirement
- 22 Total Non-Residential DSM Revenue Requirement
- 23 Projected Vintage 1 EE Participants SC Non-Residential Sales (kWh) for rate period
- 24 Projected Vintage 2 EE Participants SC Non-Residential Sales (kWh) for rate period
- 25 Projected Vintage 3 EE Participants SC Non-Residential Sales (kWh) for rate period
- 26 Projected Vintage 3 DSM Participants SC Non-Residential Sales (kWh) for rate period
- 27 **Non-Residential Rider EE Amounts (cents per kWh)**
- 28 **Non-Residential Rider DSM Amounts (cents per kWh)**

Exhibit 10, Col F, Line 14  
Exhibit 11, Line 32  
Exhibit 11, Line 32  
Exhibit 11, Line 32

**(Lines 12 through 15) \* Line 16**

Exhibit 10, Col F, Line 15

**Line 18 \* Line 19**  
Exhibit 12, Line 3 Non-residential  
**Line 20 + Line 21**

Exhibit 14, Line 24

Exhibit 14, Line 24

Exhibit 14, Line 24

Exhibit 14, Line 24

**Line 17 / (Applicable Sales from Lines 23 through 26) \* 100**  
**Line 22 / Line 26 \* 100**

Vintage 1 EE Participant	Vintage 2 EE Participant	Vintage 3 EE Participant			Vintage 3 DSM Participant		
Vintage 1 SC Retail Revenue Requirement	Vintage 2 SC Retail Revenue Requirement	Vintage 3 SC Retail Costs	Gross Receipts Tax and Regulatory Fee Factor	Vintage 3 SC Retail Revenue Requirement	Vintage 3 SC Retail Costs	Gross Receipts Tax and Regulatory Fee Factor	Vintage 3 SC Retail Revenue Requirement
\$ 60,431	\$ 569,902	\$ 5,134,457	1.004581	\$ 5,157,977			
				\$ 284,209			
100%	85%			85%			
\$ 60,431	\$ 484,417			\$ 4,625,858			
					\$ 6,037,256	1.004581	\$ 6,064,913
							85%
					\$ 1,315,689	1.004581	\$ 1,321,716
							\$ 6,476,892
9,745,896,379	9,345,300,616			9,345,300,616			8,732,320,422
0.0006	0.0052			0.0495			0.0742

**BEFORE  
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In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit 10**

**Vintage 3 – Load Impacts,  
Avoided Costs Revenue Requirements  
and Lost Revenues by Program**



Duke Energy Carolinas  
DSM/EE Vintage 3 Estimate for the Period January 1, 2012 to December 31, 2012  
Load Impact, Costs and Lost Revenues by Program

V3  
Exhibit 10

				A	B	C	D	E	F	G
				System Program Costs	System Avoided Cost Revenue Requirement	System Lost Revenues	SC Allocation Factor	SC Residential Program Costs	SC Residential Avoided Costs	SC Residential Lost Revenues
		System kW - Summer Peak	Energy Reduction (kWh)			Net of Variable O&M	Allocation based on kWh sales	A * D	B * D	See Exhibit 11 Support
Residential Programs										
EE Programs (at 55% Avoided Cost)										
1	Residential Energy Assessments	1,072	6,452,746	\$ 2,532,321	\$ 1,115,656	\$ 608,709	27.212160%	\$ 689,099	\$ 303,594	\$ 173,184
2	Home Energy Comparison Report	7,031	37,897,145	\$ 1,673,494	\$ 1,222,764	\$ 3,068,458	27.212160%	\$ 455,394	\$ 332,740	\$ 3,068,458
3	Smart Saver® for Residential Customers	7,633	72,025,566	\$ 7,827,013	\$ 9,344,037	\$ 16,840,668	27.212160%	\$ 2,129,899	\$ 2,542,714	\$ 4,952,709
4	Low Income Energy Efficiency and Weatherization Assistance	58	447,655	\$ 1,094,268	\$ 143,436	\$ 17,663	27.212160%	\$ 297,774	\$ 39,032	\$ 8,869
5	Energy Efficiency Education Program for Schools	2,177	7,147,368	\$ 1,509,296	\$ 1,545,437	\$ 542,587	27.212160%	\$ 410,712	\$ 420,547	\$ 152,530
6	Total for Residential Conservation Programs	17,970	123,970,480	\$ 14,636,392	\$ 13,371,330	\$ 21,078,086		\$ 3,982,879	\$ 3,638,628	\$ 8,355,751
							Allocation based on peak demand <sup>(1)</sup>			
7	Total DSM Programs (at 75% Avoided Cost)	Line 18	666,683	\$ 34,940,055	\$ 42,086,165		10.7789000%	\$ 3,766,154	\$ 4,536,426	
Non-Residential Programs										
EE Programs (at 55% Avoided Cost)										
		System kW - Summer Peak	Energy Reduction (kWh)	System Program Costs	System Avoided Cost Revenue Requirement	System Lost Revenues	SC Allocation Factor	SC Non-Residential Program Costs	SC Non-Residential Avoided Costs	SC Non-Residential Lost Revenues
						Net of Variable O&M	Allocation based on kWh sales	A * D	B * D	See Exhibit 11 Support
8	Smart Saver® for Non-Residential Customers Lighting	9,653	58,234,477	\$ 3,996,436	\$ 11,893,695	\$ 2,325,391	27.212160%	\$ 1,087,516	\$ 3,236,531	\$ 668,012
9	Smart Saver® for Non-Residential Customers Motors	303	2,692,228	\$ 167,638	\$ 572,824	\$ 92,603	27.212160%	\$ 45,618	\$ 155,878	\$ 26,779
10	Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	3	15,406	\$ 452	\$ 2,001	\$ 579	27.212160%	\$ 123	\$ 545	\$ 158
11	Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	119	662,825	\$ 81,048	\$ 190,480	\$ 24,502	27.212160%	\$ 22,055	\$ 51,834	\$ 6,964
12	Smart Saver® for Non-Residential Customers - HVAC	1,254	4,224,481	\$ 604,937	\$ 1,758,676	\$ 149,564	27.212160%	\$ 164,616	\$ 478,574	\$ 42,662
13	Smart Saver® for Non-Residential Customers - Custom Rebate	2,799	17,565,577	\$ 1,759,627	\$ 4,450,567	\$ 606,502	27.212160%	\$ 478,833	\$ 1,211,095	\$ 169,967
14	Total for Non-Residential Conservation Programs	14,130	83,394,993	\$ 6,610,138	\$ 18,868,243	\$ 3,199,141		\$ 1,798,761	\$ 5,134,457	\$ 914,542
							Allocation based on peak demand <sup>(1)</sup>			
15	Total DSM Programs (at 75% Avoided Cost)	Line 18	666,683	\$ 34,940,055	\$ 42,086,165		14.3449900%	\$ 5,012,147	\$ 6,037,256	
							Allocation based on System Retail Peak Demand			
16	Power Manager (Residential)	333,879	-	17,110,145	21,077,014					
17	Power Share (Non-Residential)	332,804	-	17,829,910	21,009,151					
18	Total DSM	666,683		34,940,055	42,086,165		25.1238900%	\$ 8,778,301	\$ 10,573,682	

(1)Total System DSM programs allocated to Residential and Non-Residential based on contribution to retail system peak.

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For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Revised Exhibit 11**

**Vintage 3 – Lost Revenue**

Duke Energy Carolinas  
DSM/EE Cost Recovery Rider 3  
Lost Revenue Related to Period January 1, 2012 - December 31, 2012

V3  
Revised Exhibit 11

		100% SC Retail (Note 1)			
		Year 3 V1	Year 2 V2	Year 1 V3	
1 Residential Energy Assessments		\$ 10,361			
2 Residential Smart Saver		\$ 508,326			
3 Low Income and Weatherization Assistance		\$ 5,581			
4 Energy Efficiency Programs for Schools		\$ 6,706			
5 Home Energy Comparison Report*		\$ -	\$ 2,045,639	\$ 1,022,819	
6 Total		\$ 530,973	\$ 2,045,639	\$ 1,022,819	

		System Amount Allocated to SC Retail (Note 2)			
		Year 3 V1	Year 2 V2	Year 1 V3	
7 Residential Energy Assessments		\$ 432,196	\$ 166,153		
8 Residential Smart Saver		\$ 14,527,285	\$ 1,805,058		
9 Low Income and Weatherization Assistance		\$ -	\$ 12,082		
10 Energy Efficiency Programs for Schools		\$ 342,979	\$ 192,903		
11 Total		\$ 15,302,459	\$ 2,176,195		
12 Allocation Factor	Exhibit 13, Line 2	27.212160%	27.212160%		
13 Allocated Lost Revenues		\$ 4,164,130	\$ 592,190		
14 Total Residential Lost Revenues	Line 6 + Line 13	\$ 530,973	\$ 6,209,768	\$ 1,615,009	\$ 8,355,751

		100% SC Retail (Note 1)			
		Year 3 V1			
15 Smart Saver® for Non-Residential Customers Lighting		\$ 48,391			
16 Smart Saver® for Non-Residential Customers Pumps and Motors		\$ 2,170			
17 Smart Saver® for Non-Residential Customers - Other Prescriptive		\$ -			
18 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products		\$ 408			
19 Smart Saver® for Non-Residential Customers - HVAC		\$ 2,696			
20 Smart Saver® for Non-Residential Customers - Custom Rebate		\$ 6,767			
22 Total		\$ 60,431			

		System Amount Allocated to SC Retail (Note 2)			
		Year 2 V2	Year 1 V3		
23 Smart Saver® for Non-Residential Customers Lighting		\$ 1,531,058	\$ 745,942		
24 Smart Saver® for Non-Residential Customers Pumps and Motors		\$ 62,621	\$ 27,812		
25 Smart Saver® for Non-Residential Customers - Other Prescriptive		\$ 378	\$ 201		
26 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products		\$ 16,283	\$ 7,812		
27 Smart Saver® for Non-Residential Customers - HVAC		\$ 90,683	\$ 56,185		
28 Smart Saver® for Non-Residential Customers - Custom Rebate		\$ 393,269	\$ 206,466		
29 Total		\$ 2,094,292	\$ 1,044,418		
30 Allocation Factor	Exhibit 13, Line 2	27.212160%	27.212160%		
31 Allocated Lost Revenues		\$ 569,902.08	\$ 284,208.73		
32 Total Non-Residential Lost Revenues	Line 22 + Line 31	\$ 60,431	\$ 569,902.08	\$ 284,209	\$ 914,542

Note 1 - Vintage 1 lost revenues are SC state specific amounts; no allocation required.

Note 2 - SC state specific lost revenue for Vintages 1 and 2 are estimated using an allocation of system amounts.

Note 3 - Vintage 1 lost revenues included in Rider 3 are for January 31, 2012. New base rates effective February 1, 2012 incorporate remaining lost revenues associated with Vintage 1.

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
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For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit 12**

**Vintage 3 – Existing DSM Program Costs for 2012**

**Duke Energy Carolinas  
DSM/EE Cost Recovery Rider 3  
Existing DSM Program Costs for 2012**

**V3  
Exhibit 12**

		Year 2012	
1 Estimated total IS/SG credits to be paid for native load programs	Line 8	\$ 9,706,742	
2 SC retail allocation factor - system peak demand	Exhibit 13, Col D, Lines 6 and 7	Residential 10.184830%	Non-residential 13.554380%
3 SC retail share IS/SG program costs	Line 1 * Line 2	\$ 988,615	\$ 1,315,689

<u>PROGRAM</u>	<u>2010 Credits Paid</u>
4 INTERRUPTIBLE SERVICE CREDITS	\$ 6,025,548.50
5 STANDBY GENERATOR PAYMENTS	\$ 2,263,650.32
6 WHOLESALE A/C LOAD CONTROL CREDITS	\$ 614,944.00
7 WHOLESALE INTERRUPTIBLE SERVICE CREDITS	\$ 802,598.86
8 <b>TOTAL CREDITS</b>	<u>\$ 9,706,741.68</u>

Notes: 2010 actual credits paid used as estimate of 2012 amounts.

**BEFORE  
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	)	

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**Exhibit 13**

**Vintage 3 – Allocation Factors**

**Duke Energy Carolinas**  
**DSM/EE Cost Recovery Rider 3**  
**Allocation Factors**

**V3**  
**Exhibit 13**

**SAW Sales Allocator**

1 NC RetailMWH Sales Allocation	2010 COS Study	MWH	SC Retail %
2 SC Retail MWH Sales Allocation	2010 COS Study	57,382,346	
3 Greenwood Retail MWH Sales Allocation	2010 COS Study	21,476,495	27.21216%
4 Total Retail	Sum Lines 1 through 3	63,588	
		78,922,429	

**Demand Allocators**

		A	B	C	D
		MW	SC Retail Res / NonRes % for SAW (1)	SC Retail % (2)	SC Retail Res / NonRes % for Existing DSM (3)
5 NC Peak Demand	2010 COS Study	11,932,643			
6 SC Residential Peak Demand	2010 COS Study	1,719,773	10.77890%		10.18483%
7 SC Non-Residential Peak Demand	2010 COS Study	2,288,743	14.34499%	25.12389%	13.55438%
8 Greenwood Peak Demand	2010 COS Study	13,841			
9 Total Retail Peak Demand	Sum Lines 5 through 8	15,955,000			
10 Wholesale Peak Demand	2010 COS Study	930,640			
11 Total System Peak Demand	Line 9 + Line 10	16,885,640			

(1) Col. A, Line 7 or 8 / Line 9

(2) Col B Line 6 + Line 7

(3) Col A Line 7 or 8 / Line 11

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	)	

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**Exhibit 14**

**Vintage 3 – Forecasted kWh Sales**



FACTOR TO EXCLUDE GREENWOOD SALES FROM FORECAST:		
	2010 MWH	Percent to Total
25 Total SC Residential sales	7,201,060	
26 Greenwood residential sales	<u>52,741</u>	
27 SC Residential excl GW	7,148,319	99.2676%
28 Total SC Non-Residential sales	14,339,023	
29 Greenwood non-residential sal	<u>10,847</u>	
30 SC Non-Residential excl GW	14,328,176	99.9244%
31 Total SC Retail Sales	21,540,083	
32 Greenwood sales	<u>63,588</u>	
33 Total SC Sales excl GW	21,476,495	

**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**Docket No. 2011-420-E**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC’S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit C**

**Duke Energy Carolinas EE and DSM Vintage 1**

**Program Overview – Revised**

**November 15, 2011**

**PUBLIC VERSION**

**CONFIDENTIAL AND PROPRIETARY VERSION**  
**WAS FILED UNDER SEAL**

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**DUKE ENERGY CAROLINAS**

**EE AND DSM VINTAGE 1  
PROGRAM OVERVIEW  
REVISED**

**PUBLIC VERSION**

## Executive Summary

### A. Description

During the first quarter 2011 Carolinas Collaborative meeting, Duke Energy is providing an update on the performance of its energy efficiency and demand side management programs for Vintage 1. Our product managers have prepared reports on each of our pilot/programs describing the offerings and details on pilot/program performance. This executive summary describes how Duke Energy Carolinas has done to date in aggregate. Pilot/program specific details will be located in the individual reports.

Pilot/program reports include:

Program	Category	Customer Group
<b>Non-Residential Smart \$aver Prescriptive</b>	EE	Non-residential
<b>Non-Residential Smart \$aver Custom</b>	EE	Non-residential
<b>PowerShare</b>	DSM	Non-residential
<b>Residential Energy Assessments</b>	EE	Residential
<b>Residential Smart \$aver</b>	EE	Residential
<b>Low Income Energy Efficiency and Weatherization Assistance Program</b>	EE	Residential
<b>Energy Efficiency Education Programs for Schools</b>	EE	Residential
<b>Power Manager</b>	DSM	Residential
<b>Home Energy Comparison Report</b>	EE	Residential

#### Audience

All retail Duke Energy Carolinas customers who have not opted out.

### B & C. Impacts, Participants and Expenses

The tables below include 2010 results for Vintage 1. These tables represent information thru December 2010. The reason we have included nominal avoided cost rather than present value of the avoided costs is because our targets for save-a-watt purposes are based in nominal dollars. Please note that because North Carolina and South Carolina have slightly different avoided costs rates, the targets for each are different.

In our reports, we have also not included the number of participants from the filing as well as the percentage of target for participants. The reason for this is because participants from individual measures can represent, for example, 1 CFL bulb in one measure or 1 six pack in another. Due to the multiple measures in programs, this can skew participation targets. To minimize confusion, this information was excluded from the report. Actual participants are included.

The information provided is for the Carolinas is for calendar year 2010. The South Carolina specific information, especially the listed performance against regulatory targets, is for 11 months. Vintage 1 in South Carolina is from February 2010 to December 2010.

## Executive Summary

### SC System Summary<sup>12</sup>

<i>\$ in Millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
<b>SC Nominal Avoided Cost</b>	\$110.4	\$201.5	183%
<b>Program Cost</b>	\$46.2	\$55.9*	121%
<b>SC kW Impact</b>	485,551	545,015	112%
<b>kWh Impact</b>	234,131,697	559,012,087	239%
<b>Units</b>		8,379,754	

\* Program costs as-filed do not include M&V. See below regarding treatment of overheads for all programs.

Through December 2010, the Company is ahead of its avoided cost target for Vintage 1. This is primarily due to high impacts in the energy efficiency program (Residential Smart Saver). The program cost for Vintage 1 is higher than projected, which has been significantly driven by the increased participation in the Residential Smart Saver program.

### Energy Efficiency

<i>\$ in Millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
<b>SC Nominal Avoided Cost</b>	\$76.5	\$163.8	214%
<b>Program Cost</b>	\$24.4	\$39.0*	160%
<b>kW Impact</b>	37,319	62,386	167%
<b>kWh Impact</b>	234,131,697	559,042,087	239%
<b>Units</b>		8,140,882	

\*Includes approximately \$4.5M in overheads and non-residential energy assessments. As filed program costs do not include M&V.

Energy efficiency impacts have primarily been driven by lighting measures in both the residential and non-residential space. As a percentage of the target, the residential portfolio has exceeded expectations to date. This is a result of a higher take rate for CFLs offerings than originally projected.

### Demand Side Management – SC System

<i>\$ in Millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
<b>SC Nominal Avoided Cost</b>	\$33.9	\$37.7	111%
<b>SC Program Cost</b>	\$21.8	\$16.9*	78%
<b>SC kW Impact</b>	448,232	482,629	108%
<b>Units</b>		238,872	

\*Includes approximately \$1.2M in overheads.

The DSM portfolio is divided between the PowerShare (non-residential) and Power Manager (residential) programs. The Company exceeded targets for avoided cost kW.

<sup>1</sup> Numbers included in all tables are rounded. Vintage 1 covers the period from February 2010 to December 2010.

<sup>2</sup> Program costs listed by program do not include approximately \$5.7 million for overheads and non-residential energy assessments.

## Executive Summary

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Note: Unlike the EE portfolio, where the kWh target is the same, the DSM portfolio has different kW targets for North Carolina and South Carolina. While the North Carolina EE docket was never closed, the original South Carolina EE docket was closed, included in the South Carolina rate case, and was adjusted up after the North Carolina filing. Both states have limitations on how much DSM can count towards the 4 year avoided cost, with South Carolina having a higher percentage due to the higher kW target.

### D. Qualitative Analysis

#### Highlights

##### Energy Efficiency

To date, customer participation has been driven primarily by lighting programs and assessments. These measures provide customers with a relatively low cost efficiency upgrade, with minimal hassle, creating a positive initial energy efficiency experience. The Residential Smart \$aver program has seen greater than expected participation. This increase has been primarily driven by the overwhelming participation in the residential CFL offering. The increased participation is attributed to expanding the channels for customers to request CFLs. The new channels are lower cost and provide an improved customer experience.

A second area to highlight is the development of our trade ally network. This network has enabled the Company to minimize acquisition costs by using trade allies as an extended sales force. Providing the trade ally network information on our incentive structure has enabled them to market the incentives to customers.

##### Demand Side Management

DSM programs significantly exceeded targets for Vintage 1. The overall program cost for demand side programs was higher than what was targeted. The higher than expected program cost is directly related to level of participation of PowerShare in both NC and SC.

#### Issues

There have been a number of issues that have negatively impacted Company specific energy efficiency programs. These programs include Low Income Energy Efficiency and Weatherization Assistance Program and Energy Efficiency Education Programs for Schools. The issues are addressed in the individual program reports.

#### Potential Changes

Several programs are reviewing their current processes, and are considering potential changes to Increase customer adoption. Potential changes are discussed in individual program reports.

### E. Marketing Strategy

Located in individual program reports.

### F. Measurement and Verification

Located in individual program reports.

### G. Technical Assumptions

Located in individual program reports.

## Non-Residential Smart Saver® Program: Smart \$aver Prescriptive

### A. Description

The Smart \$aver™ Non-Residential Prescriptive Incentive Program provides incentives to commercial and industrial consumers to install high efficiency equipment in applications involving new construction, retrofit, and to replace failed equipment. Incentives are provided based on Duke Energy Carolina's cost effectiveness modeling to assure cost effectiveness over the life of the measure.

Commercial and industrial consumers can have significant energy consumption, but may lack knowledge and understanding of the benefits of high efficiency alternatives. Duke Energy Carolina's program provides financial incentives to help reduce the cost differential between the standard and high efficiency equipment, offer a quicker return on investment, save money on their utility bill that can be reinvested in their business, and foster a cleaner environment. It also provides market demand where the dealers and distributors, or market providers, will stock and provide these high efficient alternatives as they see increased demand for the products. Higher demand can result in lower prices.

The program promotes prescriptive incentives for the following technologies – lighting, HVAC, motors, pumps, variable frequency drives, food services and process equipment. Equipment and incentives are predefined based on current market assumptions and Duke Energy's engineering analysis. The eligible measures, incentives, and requirements for both equipment and customer eligibility are listed in the applications posted on Duke Energy's Business and Large Business websites for each technology type.

Duke Energy contracts with Wisconsin Energy Conservation Corporation (WECC) to handle the fulfillment responsibilities of the program and to provide training and technical support to our Trade Ally (TA) network. CustomerLink provides call center services to customers who call the program's toll free number which is specific to the Smart \$aver Prescriptive Program.

#### Audience

All Duke Energy North Carolina and South Carolina non-residential electric customers except those that chose to opt out of the program.

### B & C. Impacts, Participants and Expenses\*

<i>\$ in Millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
SC Nominal AC	\$18.5	\$32.5	176%
Program Cost **	\$4.4	\$4.4	100%
kW	7,955	12,494	157%
kWh	31,745,599	48,829,183	154%
Units		294,848	

\*Numbers are rounded

\*\* Program costs as-filed do not include M&V. Actual results exclude overheads

\*\*\* Data in table represents program performance from February 2010 – December 2010.

## Non-Residential Smart Saver® Program: Smart \$aver Prescriptive

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Consistent with other state programs, lighting measure T8 and T5 High Bays, CFL bulbs, and occupancy sensors have provided the vast majority of impacts and participation to date. Lighting installations have a shorter payback period than most other technologies, making it easier for customers to participate. Motors, pumps, and variable frequency drives as well as HVAC units were also large drivers of impacts.

Duke Energy attributes the higher than expected participation to a number of reasons:

- More pent up demand than expected – business customers are looking for ways to save money.
- Corporate goals tied to energy efficiency – Large Business and National Account customers continue to be a driving force in the higher than expected participation.
- Trade ally outreach program (provided by WECC) – providing training and support to our trade allies who are typically the first point of contact for customers considering these types of projects.
- Duke Energy's internal customer segment teams – providing training and support to customers

To date, the company has been able to leverage support costs and its trade ally network across its regions to minimize marketing and administrative costs. However, the potential exists that acquisition costs may rise as the program continues to mature.

### D. Qualitative Analysis

#### Highlights

Getting the trade allies to buy into the program has proven to be the most effective way to promote the program to our business customers. At program rollout, Duke Energy and the WECC trade ally team took an aggressive approach to contacting trade allies associated with the technologies in and around Duke Energy's service territory. To date approximately 450 trade allies across both states, representing the different technologies are signed up as participating trade allies. Their company name and contact information appears on the trade ally search tool located on the Smart \$aver™ website. This tool was designed to help customers who do not work with a local trade ally, find someone in their location who can serve their needs. WECC manages the trade ally database where contact information and participation is reported.

Duke Energy continues to look for ways to engage the trade allies in promotion of the program, including the utilization of focus groups. Suggestions were obtained from two focus groups of top trade ally Lighting and HVAC performers in North Carolina and South Carolina, held in November 2009, and have resulted in the development of an email application submission option. Other suggestions included limited time bonus incentives and a trade ally bonus program.

Duke Energy continues to develop case studies and testimonials from customers who have participated in the program. These are used to help promote the program; showing actual savings and benefits for each technology type.

#### Issues

Although participation in lighting continues to be better than expected, there are other measures that provide greater savings to customers that have had little or no participation. Examples of these are Heat Pump Water Heaters, some Food Services equipment and Compressed Air nozzles. In some cases, this is



## Non-Residential Smart Saver® Program: Smart \$aver Prescriptive

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due to the cost of these measures. However, until demand increases, market costs are not likely to go down. Duke Energy continues to work with experienced engineering consultants as well as WECC. Both are familiar with the challenges of moving the market and developing a strategy to increase the participation of these measures going forward. These include the development of targeted marketing campaigns to increase participation in high impact measures; notably variable frequency drives.

Another challenge is the continued weakness of the economy which has resulted in lower than estimated participation in certain measures. Many businesses have capital projects that have been approved but are sitting on the shelf until the economy becomes more stable.

### Potential Changes

Standards continue to change and new, more efficient technologies continue to emerge in the market. The Company expects to continue adding new measures to approved programs that provide incentives for a broader suite of products for customers to take advantage of.

### E. Marketing Strategy

- Primary delivery of the program is through the existing market channels, equipment providers, and contractors. WECC's trade ally Team provides training and technical assistance to stimulate additional participation and to address identified market barriers.
- Duke Energy's Large Business Customers receive e-mails and informational materials from their Account Managers since program rollout and continuously throughout the year. The Account Managers work closely with their customers from project planning stage through application submittal.
- Duke Energy's Small Business customers receive newsletters and emails announcing program updates.
- Duke Energy Segment Managers focus on specific markets within their customer class and target them with special promotions (webinars, collateral) and support to improve penetration of the technologies where there is the best potential, the biggest customer need, or the best opportunity for long-term market effects.
- Duke Energy's Business Service Center and CustomerLink promote the program when answering calls from business customers.
- Duke Energy's North Carolina and South Carolina business and large business websites are a great source of program information. Customers can go to the websites and learn about the program and its benefits, search for participating vendors, ask questions on-line and fill out and print all the applications.
- In conjunction with WECC, Duke Energy participates in various trade shows, conferences, and energy forums to educate customers and vendors on the benefits of the program, portfolio offerings, and program requirements.

## Non-Residential Smart Saver® Program: Smart \$aver Prescriptive

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- Duke Energy develops case studies and customer testimonials to profile actual savings and benefits for each technology type. These are used in a variety of marketing channels.
- Duke Energy's marketing efforts for the Smart \$aver™ Prescriptive Program is often done in conjunction with the Custom Program.

### F. Measurement and Verification

#### Evaluation Measurement & Verification Schedule

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q4	Q2	Q2	Q3	Q4

#### Marketing Materials

North Carolina Website

<http://www.duke-energy.com/north-carolina-business.asp>

South Carolina Website

<http://www.duke-energy.com/south-carolina-business.asp>

## Non-Residential Smart \$aver® Program: Smart Saver Custom

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### A. Description

Duke Energy's Smart \$aver Non-Residential Custom Incentive Program offers financial assistance to qualifying commercial, industrial and institutional customers (that have not opted out) to enhance their ability to adopt and install cost-effective electrical energy efficiency projects.

The Smart \$aver Custom Incentive program is designed to meet the needs of Duke Energy customers with electrical energy saving projects involving more complicated or alternative technologies, or those measures not covered by standard Smart \$aver Prescriptive Incentives. The intent of the Smart \$aver Program is to encourage the implementation of energy efficiency projects that would not otherwise be completed without Duke Energy's technical or financial assistance.

The Custom Incentive application is for projects that are not addressed by the applications for Smart \$aver Prescriptive Incentives. Unlike the Prescriptive Incentives, Custom Incentives do require pre-approval prior to the project implementation. Proposed energy efficiency measures may be eligible for Custom Incentives, if they clearly reduce electrical consumption and/or demand.

Currently there are the following application forms that are located on the Duke Energy website under the Smart \$aver Incentives (Business and Large Business tabs):

- **Optional Pre-screen Form:** allows customers and their vendors to submit preliminary project information and receive feedback on potential eligibility and tips on filling out the application form.
  - o Smart Saver Custom Incentive Pre-screen Form (doc, 102 KB)
- **Generic Custom Application:** Customers or their vendors submit this form with supporting documentation for any type of energy efficiency project. This form is designed for multiple projects and multiple locations.
  - o Custom Incentive Application (doc, 374 KB)
  - o Custom Incentive Application (pdf, 83 KB)
- **Custom Lighting Application** (Optional- 2 parts). For lighting projects, customers and their vendors can use the generic custom application form or use the 2-part lighting application that includes an excel worksheet with step-by-step instructions.
  - o Custom Lighting Incentive Application - Part I (doc, 196 KB)
  - o Custom Lighting Incentive Application - Part II (xls, 89 KB)

### Audience

All Duke Energy North Carolina and South Carolina non-residential electric customers except those that chose to opt out of the program.

## Non-Residential Smart Saver® Program: Smart Saver Custom

### B & C. Impacts, Participants and Expenses\*

<i>\$ in millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
SC Nominal Avoided Cost	\$7.9	\$9.0	114%
Program Cost**	\$4.7	\$1.6	34%
Energy Impact (kW)	1,923	2,596	135%
Energy Impact (kWh)	12,096,000	20,892,129	173%
Units		4,113	

\* Numbers rounded

\*\* Program costs as-filed exclude M&V. Actual results exclude overheads

\*\*\* Data in table represents program performance from February 2010 – December 2010.

During 2010, custom incentives were paid on a wide variety of projects such as (in order of total incentives paid): energy management/building controls systems \$395,921, lighting \$248,264, HVAC system upgrades \$109,500, motors \$92,224, variable speed drives \$54,270, compressed air \$30,000, thermal envelope \$8,000 and an additional \$131,000 on projects that are outside these classifications.

### D. Qualitative Analysis

#### Highlights

Participation was strong in 2010, and is expected to grow significantly in 2011 and beyond. The number of new applications and inquiries has seen steady growth.

The efforts to educate the vendors who sell energy efficient equipment (trade allies) have been very successful. In many cases, the vendor will submit the paperwork for the Duke Energy customer, which eliminates a barrier for customers that do not have the resources to devote to the application.

#### Issues

The custom incentive application process is considered burdensome by some customers due to the technical review that is performed on all projects that apply for a custom incentive. The technical review often requires customers (or their vendor) to quantify the projected energy savings from the proposed project. This can be a lengthy process that can require some level of engineering expertise. This requirement will continue, thus ensuring that incentives will be paid for cost-effective verifiable efficiency gains. Those technologies that seem to be a good fit for the Smart Saver prescriptive program will be recommended as additions to the prescriptive application(s). The more that is offered through the prescriptive applications, the fewer the burdens that prevent customers from participating in the Smart Saver program.

#### Potential Changes

Duke Energy is testing a new marketing concept that attempts to combine Assessments with Smart Saver custom incentives to encourage Commercial customers to identify and implement Energy Conservation Measures (ECMs) within their facilities. This concept is named Smart Building Advantage (SBA). SBA encourages customers to conduct detailed assessments of their facilities in order to identify financially viable modifications that will improve efficiency and reduce their electric costs. SBA is designed to develop investment grade efficiency recommendations for customers and provide assistance in applying for Smart Saver incentives. Customers are more likely to invest in energy efficiency modifications if they can receive assistance in identifying changes that result in clear

## Non-Residential Smart \$aver® Program: Smart Saver Custom

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operational and financial benefits. SBA helps the customer through the process to ensure they have solid recommendations from which they can make sound financial decisions around energy efficiency changes.

### E. Marketing Strategy

The marketing strategy for custom incentives is tied to the Smart \$aver prescriptive incentives. See the report on prescriptive incentives for a description. The strategy is to promote prescriptive incentives, which show pre-approved incentive amounts that get customers interested in a project and are designed for a high volume of applications. Then, if a customer's project does not fall under prescriptive incentives, the custom application is there to offer as an alternative.

### F. Measurement and Verification

#### Evaluation Measurement & Verification Schedule

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q4	Q2	Q2	Q3	Q4

## PowerShare®

### A. Description

PowerShare® is Duke Energy's demand side management (or demand response) program offered to Commercial and Industrial customers. Currently made up of Mandatory (PS-M), Generator (PS-G), Voluntary (PS-V), and CallOption (in SC) options, customers can choose from a variety of offers. Under PS-M and PS-G, customers receive capacity credits for their willingness to shed load during times of peak system usage. These credits are received whether an event is called or not. Energy credits are also available for participation (shedding load) during curtailment events. The notice to curtail under these offers is often rather short (15-30 minutes) and there are penalties for non-compliance during an event.

#### Audience

PowerShare® is offered to non-residential customers who are able to meet the load shedding requirements.

### B & C. Impacts, Participants and Expenses\*

<i>\$ in Millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
<b>SC Nominal Avoided Cost</b>	\$11.1	\$19.6	177%
<b>SC Program Costs**</b>	\$7.3	\$7.1	97%
<b>SC kW Impact</b>	142,679	250,747	176%
<b>Units</b>		103	

\* Numbers are rounded

\*\* Program costs as filed did not include M&V. Actual program costs do not include overheads.

\*\*\* Data in table represents program performance from February 2010 – December 2010.

#### Variance

PowerShare® participation (as measure in impacts) is above target (on a system basis)—as did avoided costs and program costs during 2010. With the Commission ruling that split the DSM and EE portions of the North Carolina rider (and aligned the rider structure with South Carolina), some customers did opt-in to PowerShare® offerings at the end of the year. A portion of this impact was seen in the last months of 2010 and there is more that will be first counted as a resource in 2011.

Note: Unlike the EE portfolio, where the kWh target is the same, the DSM portfolio has different kW targets for North Carolina and South Carolina. This is because while the North Carolina EE docket was never closed, the original SC EE docket was closed, was included in the South Carolina rate case, and was adjusted up after the North Carolina filing. Both states have limitations on how much DSM can count towards the 4 year avoided cost, with South Carolina having a higher percentage due to the higher kW target.

### D. Qualitative Analysis

#### Program Highlights

PS-Mandatory and PS-Generator have been well received by customers in both states. Most IS and SG customers in South Carolina moved over to PS-M and PS-G, respectively. The former SG customers that did not switch were mostly small generators and don't qualify for PS-G because of the minimum curtailable load requirement. CallOption might be an option for these customers with its reduced minimum requirement, and we hope to see more of these customers sign-up during 2011.

## PowerShare®

### Program Issues

Based on customer feedback received during focus group sessions, customers indicated they wanted more options, greater flexibility and longer lead time (notice) of events. For example, some customers could not respond in the 15 or 30 minute afforded under the existing programs. Duke Energy took that feedback and used it to shape the parameters of CallOption. This new offer provides for a minimum of six hours advanced notice and allows the customer to pick a level of commitment to curtailing load. For a willingness to participate in more events, Duke Energy is able to pay the customer more in capacity credits.

### Potential Changes

As a way of building on to the existing options, Duke Energy proposed CallOption as a new offer under the PowerShare® umbrella. With CallOption, customers receive a longer notification window and can qualify to participate at lower curtailable loads. This means customers who would otherwise not be able to participate in PowerShare® can earn capacity credits for their willingness to shed load during times of peak usage and receive energy credits when they respond to curtailment events. Furthermore, for economic events, customers have the option of buying through the event without paying penalties or being subject to expulsion from the program. Customers get to choose their level of participation by selecting the number of potential events for which they want to sign up. This gives them the flexibility to increase their capacity credits. Also, more flexibility is included in how the curtailable load is calculated, either a firm demand is set by the customer (similar to PS-M, PS-G or PS-V) or they establish a fixed demand reduction and shed a specific amount of energy below their projected usage on an hourly basis. While CallOption has been approved in SC, it is still pending a Commission ruling in NC.

## E. Marketing Strategy

Marketing efforts for PowerShare® have focused on the relationship between the Duke Energy account managers and their assigned customers. As part of their normal contact with customers, the Account Managers have introduced PowerShare®, including any new options/offers while explaining the value proposition to the customer. These visits are supported with in-house, analytical spreadsheets, showing the specific incentives for each offer as applied to the customer's specific load profile as well as collateral to explain the details of all the PowerShare® offers.

In addition to the above marketing efforts, webinars were held to introduce CallOption and to review the details around the PowerShare® offers. Multiple sessions were offered with varying levels of participation. Since the primary focus in SC during 2010 was on converting previous IS and SG participants to PowerShare®, the Company has not spent a significant amount of the time selling new participants on CallOption. We will conduct further training with the Account Managers in 2011 in an effort to create "new" PowerShare® customers via CallOption. Due to the marketing efforts, we received a high enrollment of customers in a short time.

## F. Measurement and Verification

**Evaluation Measurement & Verification Schedule**

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q3	Q2	Q3	Q2	Q3

## G. Technical Assumptions

Impacts vary based on the amount of load customers opt to make available.

## Residential Energy Assessments

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### A. Description

The Residential Energy Assessments program includes two separate measures: 1) Personalized Energy Report (PER) ® and 2) Home Energy House Call.

**The Personalized Energy Report (PER)® Program** is a residential energy efficiency program that provides single- family home customers with a customized report about their home and how their family uses energy, which can be provided in two ways: 1) postal mail 2) online. The overall goal is to help the customer better understand his/her energy usage and to better manage energy costs. In addition, the customer receives CFLs as an incentive to participate in the program.

The PER program have two variations: The first is a mailed offer, and the second is an online offer to Duke Energy customers that have signed into our Online Services (OLS) bill pay and view environment. The mailed PER offer involves more work, but it appeals to certain market segments. Eligible customers are chosen by the Duke Energy market analytics team to maximize the participation by mailing an offer to those customers most likely to respond. This program targets those customers who may not have access to a computer or would not answer an online survey. However, since the online survey participants are much easier to process, both means of completing the survey are offered. Online participants get their PER online in a printable PDF, and customers mailing the energy survey receive their PER in the mail.

The Online Energy Survey is offered two ways.

- 1) We offer it as part of the mailed PER offer, and 5 percent to 10 percent of the participants choose the online survey instead of the return mail survey.
- 2) We also offer the online survey to other eligible customers when they visit their account information online.

We track these two types of survey participants separately.

**Home Energy House Call (HEHC)** is a free in-home assessment designed to help our customers learn about home energy usage and how to save on monthly bills. The program provides personalized information unique to the customer's home and energy practices. An energy specialist visits the customer's home to analyze the total home energy usage and to pinpoint energy saving opportunities. An energy specialist will also explain how to improve the heating and cooling comfort levels, check for air leaks, examine insulation levels, review appliances, help the customer preserve the environment for the future and keep electric costs low. A customized report is prepared, explaining the steps the customer can take to increase efficiency. As a part of the Home Energy House Call program, customers receive an Energy Efficiency Starter Kit. At the request of the customer, the energy specialist can install the efficiency items that allow the customer to begin savings immediately.

The HEHC program is administered by a third party vendor, Wisconsin Energy Conservation Corporation (WECC). WECC provides support services based on Duke Energy forecasts; schedules and completes audits; and reports and uploads results to Duke's participation database. Additional key vendors include ProtoType, which is responsible for mailing customer acquisition brochures, CustomerLink, which is the call center providing customer care support and scheduling and Niagara, which is accountable for creating the Energy Efficiency Starter kits the customer receives at the time of the audit.

### **Audience**

Personalized Energy Report targets residential customers who want customized information regarding their energy use, as well as specific recommendations to reduce their usage and utility bill.



## Residential Energy Assessments

Home Energy House Call targets residential customers that own a single family home with at least four months of billing history and have central air, electric heat or an electric water heater.

### B & C. Impacts, Participants and Expenses\*

\$ in millions	Vintage 1 Filed	Vintage 1 Actual	% of Target
SC Nominal Avoided Cost	\$6.7	\$2.8	42%
Program Costs**	\$2.8	\$2.4	86%
Energy Impact (kW)	3,684	1,166	32%
Energy Impact (kWh)	24,762,131	8,613,288	35%
Units		15,676	

\* Numbers rounded

\*\*Program costs as filed did not include M&V. Actual program costs do not include overheads.

\*\*\* Data in table represents program performance from February 2010 – December 2010.

### D. Qualitative Analysis Highlights

**Personalized Energy Report:** Regarding the mailed PER offer, one of the most important attributes to our success is the ability of our internal market analytics to use market segment information and predict the potential response rates of different residential segments. Often, in this day of electronic correspondence, customers who get an opportunity to respond to a mailed survey instead of an online survey are eager to participate.

The PER campaign began in the fall of 2009 with 175,308 offers mailed to North Carolina and South Carolina customers. Much of the participation was seen in 2009, but the activity continued into 2010 with 23,532 participants. The total campaign customer response rate was approximately 24%.

Carolina's PER Participation from January 2010 to December 2010 \*

State	Total participation
North Carolina	16,983
South Carolina	6,549
Total Carolinas	23,532

\*Data in table represents Carolinas program performance from January 2010 – December 2010.

The Online Survey offer to OLS customers continued in 2010. Participation increased during active promotions, such as the online reminder to complete the survey for a free six pack of CFLs.

Carolina's OLS Survey Participation from January 2010 to December 2010 \*

State	Total participation
North Carolina	3,364
South Carolina	1,297
Total Carolinas	4,661

\*Data in table represents Carolinas program performance from January 2010 – December 2010.

## Residential Energy Assessments

**Home Energy House Call:** The Home Energy House Call program is offered to residential homeowners. The annual goal was 5000 for the Carolinas; due to increased customer interest, we exceeded our goal with customers sitting on our waiting list until appointments became available.

Carolina's HEHC In-Home Assessment Participation January 2010 to December 2010 \*

State	Total participation
North Carolina	4,690
South Carolina	1,798
<b>Total Carolinas</b>	<b>6,488</b>

\*Data in table represents Carolinas program performance from January 2010 – December 2010.

These participants responded to our direct mailing brochure and registered by phone, mail or online. Once appointments were scheduled, an energy specialist arrived at customers' homes to identify potential energy problems and to provide an Energy Efficiency Starter Kit, as well as additional CFLs.

### Issues

- We had several issues with the PER data transfer between Duke and Aclara (former vendor), and the scan process was challenged by the overwhelming response. All the offers went out at the same time, and in the future, we have agreed that the offer being mailed in separate waves would be an improvement. All processing issues have been resolved for future campaigns.
- Increased interest in the HEHC program has created a larger than normal waiting list; over 45 days. HEHC is a new program in the Carolinas, and word of mouth has been successful, as well as a hindrance. Everyone has been trying to take advantage of this program due to the home energy audit, Energy Starter Kit and a detailed report pinpointing potential energy inefficiencies. Additional auditors have been supplied to reduce the backlog, and we have found that most customers are willing to wait because of the idea of having an energy specialist visit their homes. Increased spending has occurred due to increased awareness of the new product in the market place. Knowing there is a delicate balance of supply and demand, we have created a reporting tool to assist with mail drop estimates to avoid customers being placed on our waiting lists.
- In the current market, we are seeing an approximate 2 percent response rate across all five of our service states, which are adequate, but for this type of program, HEHC should have a higher response rate especially during such hard economic times. We are currently working on how to increase the response rates while reducing direct mail drops.

### Potential Changes

- Future PER campaigns will emphasize the online survey as being the fastest way to receive the report and the CFLs, but paper reports will still be available.
- With so many customers willing to participate in HEHC, program goals were met in August for the Carolinas. We have decided to extend the goal in the Carolinas to a "do not exceed" amount because of how difficult it is to find such talented auditors that are customer friendly and already have been with the program since January of 2009. Our customers are continuing

## Residential Energy Assessments

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to call Customer Link, and the program is in such demand, we do not want to lose momentum in the market place.

- For the HEHC program, specialty bulbs are being considered as additions to the program (DSMore runs are taking place currently). These specialty bulbs include candelabra and recessed lighting bulbs. We have found most homes have lighting fixtures requiring these specialty bulbs, and this is a huge opportunity to consider for HEHC.
- Currently, program enhancements are taking place. CustomerLink scripts are being improved to inform the customer of the EE Starter Kit and installation of CFLs. The customer reminder call prompts customers about their appointments to decrease cancellation rates, as well as to begin looking for places to install efficiency measures. We also are looking into reducing the number of questions our auditors ask during the in-home assessment. By saving time with how many questions a customer has to answer, our auditors are able to focus more on energy savings inside the home while installing more measures. By making these improvements, this will allow Duke Energy to increase impacts from each participant in the program.
- Duke Energy's marketing analytics team has the ability to pull customer information directly from our billing system. Marketing analytics will receive a list of zip locations to target and will pull customer data and send to ProtoType for further scrubbing before brochures are mailed. Some TV and Radio media has been used when requested. The overall strategy for this program is to reach all customers in Duke Energy's service territory, to promote energy efficiency by customers understanding the importance of conservation and to help the environment. By customers reducing their electric bill, Duke Energy is able to reduce its need to build additional power plants and, ultimately, keep its rates as low as possible.

HEHC Program information is available to all customers on the Duke Energy Web site:  
<http://www.duke-energy.com/north-carolina/savings/home-energy-house-call.asp>.

### E. Marketing Strategy

The overall strategy for the mailed PER campaign is to maximize the response rate of the mailed offer. Since the mailed offer includes a survey that is preprinted with specific customer coding, the initial expense of the mailing needs to be considered for the cost effectiveness of the program. Maximizing the response rate greatly influences the cost effectiveness. Some customers try to participate more than once in the online program, but we do not mail duplicate CFLs within this particular program offer.

Of equal importance to the installation of CFLs is the content of the PER report, which is designed to duplicate what a customer would see in his/her online PER report. The goal here is to help customers review their past energy use, compare their usage to other similar homes, understand where the energy use is going and to read tips on how to conserve.

The marketing strategy for the HEHC program is to pre-qualify customers before sending out direct mail brochures. Pre-qualification of customers will reduce overall customer acquisition costs. Analyzing HEHC's previous customer data, such as response rates and seasonal trends, this analysis will help balance the load of supply and demand while minimizing customer wait time. HEHC registration is also available online to reduce mail costs as well. Maximizing response rates are key for overall program cost effectiveness.

## Residential Energy Assessments

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### F. Measurement and Verification

#### Evaluation, Measurement & Verification Schedule

##### Personalized Energy Report/Online Services Survey

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q2	Q2	Q4	Q4	Q4

##### Home Energy House Call

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q2	Q2	Q4	Q4	Q4

## Residential Energy Assessments

### Appendix



DUKE ENERGY  
139 East Fourth Street  
Cincinnati, OH 45202

September 17, 2009



Dear

Duke Energy understands your concern about your rising energy costs. That's why we're pleased to offer a free **Personalized Energy Report (PER)™**. The report details how you use energy and how you can save energy. Plus, for a limited time you will also receive a **free** six pack of Compact Fluorescent Light Bulbs (CFLs). An ENERGY STAR®-qualified CFL saves about \$30 in energy costs over its lifetime. Replace your home's six most frequently used bulbs with CFLs and watch your savings grow to \$150.

Your Personalized Energy Report will provide you with a better understanding of your energy usage and offer customized ideas to help you save money on your monthly bill. You simply answer a few questions about your home appliances and how you use energy, and the report is personalized for you.

With the Personalized Energy Report you can:

- Understand how your household uses energy
- View your home's month-to-month energy usage and bill amount trends
- Compare your home's energy usage to similar households in your area
- Receive energy savings tips for your home
- Learn about programs that may save you money

#### Get Your FREE Personalized Energy Report and Six Pack of CFLs Now

Just complete the Home Energy Survey. You can complete the survey in one of two ways:

- **Online.** Go to [www.duke-energy.com](http://www.duke-energy.com). If you are a current Online Services user, sign in to manage your account. If you are a new online user, click Register to sign up. Once you sign in, take the brief Energy Survey, you will see your customized Personalized Energy Report online immediately.

**Important: To receive your free six pack of CFLs, you must enter promotion code 1901 at the bottom of the Energy Survey Web page.**

While you are at our Web site, check out all the other energy saving information, interactive tools and programs we offer to help you save energy and money.

- **Paper.** If you prefer, you can complete the enclosed questionnaire and mail it in the postage-paid envelope before September 30, 2009. Your Personalized Energy Report will be mailed to your home within three weeks from the date we receive the completed questionnaire.

You will receive your free six pack of CFLs soon after you receive your Personalized Energy Report. Thank you for your interest in saving energy. We look forward to helping you take control of your monthly energy costs.

D. Welklin  
Personalized Energy Report Manager

[www.duke-energy.com](http://www.duke-energy.com)

RECEIVE YOUR

# Residential Energy Assessments

**RECEIVE YOUR FREE, PERSONALIZED ENERGY REPORT (PER)™**



FOR THE ADDRESS SHOWN ABOVE, PLEASE ANSWER THE FOLLOWING QUESTIONS RELATED TO YOUR HOME AND ENERGY USAGE. FILL IN THE CIRCLES COMPLETELY USING BLUE OR BLACK INK.

## PROPERTY DETAILS

1. What type of home best describes your primary residence? (check only one)
  - ☐ Detached single family
  - ☐ Duplex / 2 family
  - ☐ Townhouse
  - ☐ Apartment / Multi – Family / (3 or more units)
  - ☐ Condominium
  - ☐ Manufactured home
2. How many levels does your home have, excluding the basement and unfinished attic?
  - ☐ 1
  - ☐ 2
  - ☐ 3
3. In what year was your home built?
  - ☐ Before 1959
  - ☐ 1960 – 1979
  - ☐ 1980 – 1989
  - ☐ 1990 – 1997
  - ☐ 1998 – 2000
  - ☐ 2001 – 2007
  - ☐ 2008
4. Does your home have an attic?
  - ☐ Yes
  - ☐ No
5. Does your home have a basement?
  - ☐ Yes, heated
  - ☐ Yes, unheated
  - ☐ No
6. Excluding bathrooms and hallways, how many rooms are in your home? (include finished basement)
 

<input type="checkbox"/> 1	<input type="checkbox"/> 6
<input type="checkbox"/> 2	<input type="checkbox"/> 7
<input type="checkbox"/> 3	<input type="checkbox"/> 8
<input type="checkbox"/> 4	<input type="checkbox"/> 9
<input type="checkbox"/> 5	<input type="checkbox"/> More than 9

7. How would you describe the size of the rooms in your home?
  - ☐ Above average
  - ☐ Average
  - ☐ Below average
8. Approximate size (heated area) of your home? Your answers to questions 6 & 7 above will allow us to estimate the size of your home in square feet. Or, if you know the square footage of your home, you may choose it here and we will use your input.
  - ☐ < 500
  - ☐ 500-999
  - ☐ 1000-1499
  - ☐ 1500-1999
  - ☐ 2000-2499
  - ☐ 2500-2999
  - ☐ 3000-3499
  - ☐ 3500-3999
  - ☐ 4000 or more
  - ☐ Don't know

## MAIN HEATING SYSTEM

9. What is the fuel used in your primary heating system?
  - ☐ Electric
  - ☐ Natural Gas
  - ☐ Oil
  - ☐ Propane
  - ☐ Other (solar, wood, etc)
  - ☐ No heat system
10. Which of the following best describes your home's primary heating system?
  - ☐ Electric Baseboard or ceiling cable
  - ☐ Forced air furnace
  - ☐ Standard heat pump
  - ☐ Ground source heat pump
  - ☐ Water boiler
  - ☐ Steam boiler
  - ☐ Wood heating system
  - ☐ Heat pump with gas backup
  - ☐ Heat pump with propane backup
  - ☐ Heat pump with oil backup
  - ☐ No heat system

11. How old is your heating system?
  - ☐ 0 – 4 years
  - ☐ 5 – 9 years
  - ☐ 10 – 14 years
  - ☐ 15 – 19 years
  - ☐ 20 years or greater

## COOLING SYSTEM

12. Do you have a central cooling system? (If you use window or room air conditioners, you will note this in question 14)
  - ☐ No central cooling system
  - ☐ Central air conditioning
  - ☐ Heat Pump
13. If you have any cooling system, how old is it?
  - ☐ 0 – 4 years
  - ☐ 5 – 9 years
  - ☐ 10 – 14 years
  - ☐ 15 – 19 years
  - ☐ 20 years or greater
14. Do you use room or window air conditioners?
  - ☐ Yes
  - ☐ No
15. How many room or window A/Cs?
  - ☐ 1
  - ☐ 2
  - ☐ 3
16. If you have a central heating and cooling system with air ducts, are any of these ducts located in the attic?
  - ☐ Yes
  - ☐ No
  - ☐ Not applicable







# Residential Energy Assessments

## PERSONALIZED ENERGY REPORT (PER)<sup>™</sup>

November 24, 2009



Dear Customer:

Thank you for joining thousands of households that have taken steps to save energy and money by requesting a **Personalized Energy Report (PER)<sup>™</sup>**. This report analyzes your past energy usage and evaluates your answers from the energy survey, to provide:

- A history and seasonal chart of your energy use
- A pie chart estimating how much energy is used
- A comparison of your energy use to similar homes
- Tips that help you save energy and money.

A copy of your report is also available online at [www.duke-energy.com](http://www.duke-energy.com) when you sign in to Online Services. When you sign in to manage your account, be sure to visit the Home Energy Center, where you will find a wide assortment of energy saving tips, tools and helpful charts.

Sincerely,

Dan Welklin  
Personalized Energy Report (PER)<sup>™</sup> Manager

### YOUR PERSONALIZED ENERGY REPORT (PER)<sup>™</sup>

Prepared for

Account No.

Date Prepared

November 24, 2009

Type of Home

Single Family

Home Size

1,750

Year Home Built

2001 - 2007

Space Heating Fuel

Propane

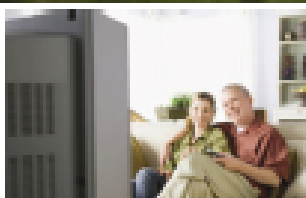
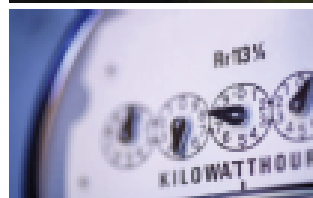
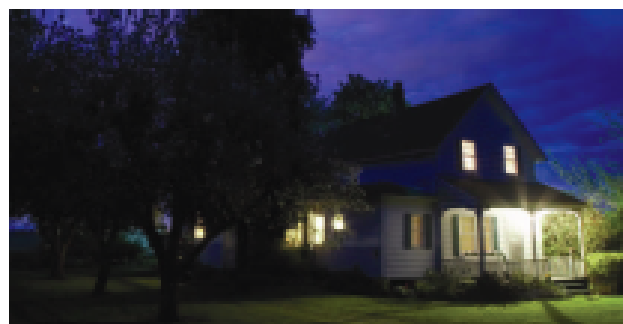
Water Heating Fuel

Electricity



## Residential Energy Assessments

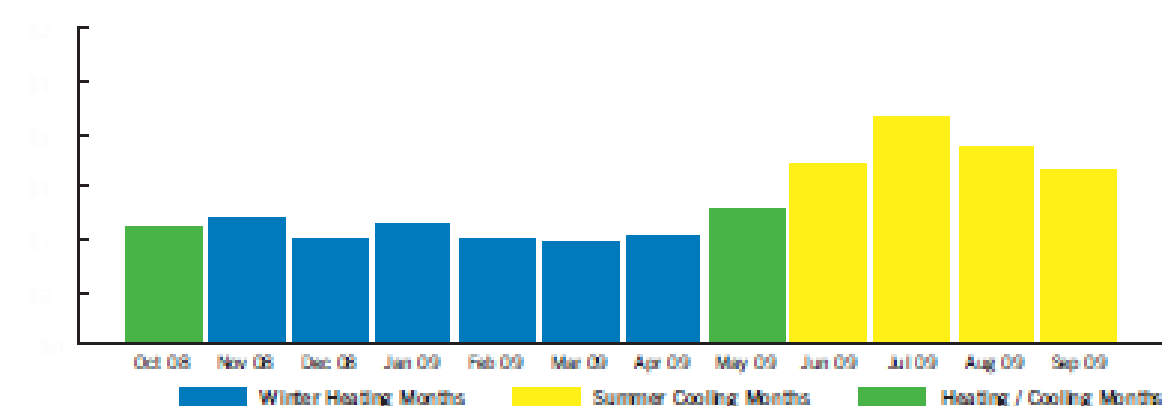
### YOUR MONTHLY ELECTRIC USAGE WITH AN APPROXIMATE ELECTRIC CHARGE\*



OCTOBER 2008 - SEPTEMBER 2009		
Bill Month	Electricity Usage (KWh)	Approximate Bill*
Oct 08	915	\$78
Nov 08	982	\$84
Dec 08	827	\$71
Jan 09	944	\$81
Feb 09	820	\$70
Mar 09	787	\$67
Apr 09	848	\$72
May 09	1,056	\$90
Jun 09	1,397	\$119
Jul 09	1,777	\$152
Aug 09	1,532	\$131
Sep 09	1,352	\$115
Total	13,237	\$1,129

**\*Important:** Average energy rates are used in this report. The bill amounts in this table and following charts will not match your actual energy costs. For detailed information on your actual bills, visit "Energy Usage and Cost Details" in your Online Services account at [www.duke-energy.com](http://www.duke-energy.com).

### A SAMPLE OF YOUR HOME'S MONTH-TO-MONTH ELECTRIC USE\*



\* Note that your energy use can be impacted by seasonal weather.

### KNOW YOUR BILL AMOUNT IN ADVANCE

The **Equal Payment Plan** is a free service that makes managing your budget easier by providing a predictable monthly bill. Equal Payment Plan covers all basic services. Additional services, such as outdoor lighting, are not included in the plan.

Your monthly bill is based on your previous year's electricity usage and is divided into 11 equal payments. It makes planning and budgeting your energy costs more accurate and convenient. All you need is an account with a record of good payment for the past 12 months.

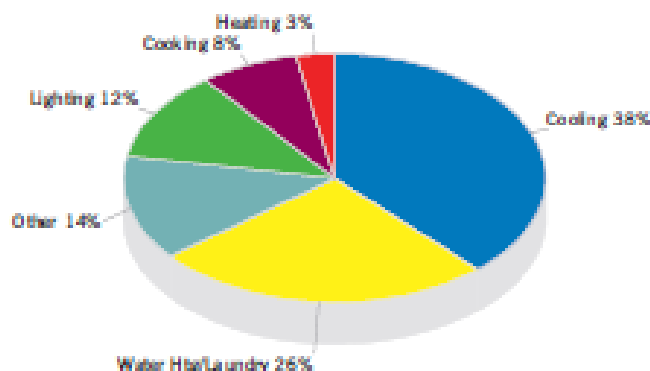
To sign up or learn more, visit [www.duke-energy.com/south-carolina/billing/equal-payment.asp](http://www.duke-energy.com/south-carolina/billing/equal-payment.asp).



## Residential Energy Assessments

### HOW YOUR HOUSEHOLD USES ELECTRICITY

2008-2009 ANNUAL COST BREAKDOWN	
Cooling	\$431
Water Htg/Laundry	\$294
Other	\$154
Lighting	\$131
Cooking	\$86
Heating	\$33
<b>Total</b>	<b>\$1,129</b>



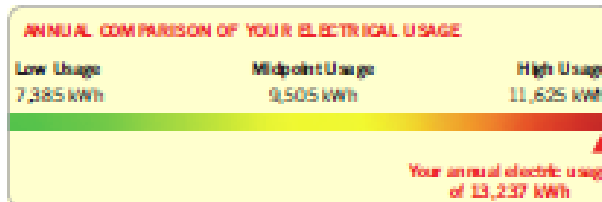
The dollar amounts and percentages in this pie chart are estimates based on inputs you provided on your survey. They are not based on actual measured readings from your home.

### YOUR HOME'S ANNUAL ELECTRIC USAGE COMPARISON TO SIMILAR HOMES

The scale to the right shows you how your household's annual electric usage compares with the range of usage by similar households serviced by Duke Energy in South Carolina.

This comparison considers your home's fuel blend, the number of people in your family, and other information you provided in your questionnaire.

Using electricity wisely is good for the environment, saves you money, and may reduce the need to build more power plants in South Carolina. And that's good for everybody.



### NO CHECKS, NO STAMPS, NO HASSLES

**Automatic Monthly Payment** is a free service that automatically pays your energy bill by withdrawing from your bank account on or after your payment date. There are no due dates to remember, checks to write or stamps to buy.

When you enroll, you select a payment date that is 10 to 14 days after your bill date. Enrolling is easy. All you need is a check or deposit slip from your bank and your Duke Energy account number.

To sign up or learn more, visit [www.duke-energy.com/south-carolina/payment/automatic-monthly.asp](http://www.duke-energy.com/south-carolina/payment/automatic-monthly.asp).



## Residential Energy Assessments

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### ENERGY SAVING TIPS FOR YOUR HOME

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#### HEATING

In the winter, if you manually set your thermostat down to save money while you're gone, when you return, reset your thermostat to the normal temperature setting. Setting the thermostat really high won't help it heat up any faster.

When heating your home, try to minimize the number of times that doors to the outside are opened and closed; cold outside air enters your home each time you open the door.

The use of ceiling fans in the winter is most effective in rooms with very high ceilings, where warm air rises and collects above the living space. Normal rooms of 8 to 10 foot ceilings will see little benefit from fan usage.

If you've turned down your thermostat in the winter to save money, you may be uncomfortable in the evening hours when you are less active. For these short periods, consider using a portable heater to warm the room that you occupy instead of turning up the thermostat.

#### COOLING

In the summer, if you manually set your thermostat up to save money while you're gone, when you return, reset your thermostat to the normal temperature setting. Setting the thermostat really low won't help it cool down any faster.

In the summer, use the exhaust fans in your kitchen and baths to exhaust hot air and moisture. Both the heat and the humidity is an extra load on your air conditioner.

When air conditioning your home, try to minimize the number of times that doors to the outside are opened and closed; hot and humid outside air enters your home each time you open the door.

When air conditioning, avoid activities that add heat and humidity to your home during the hottest parts of the day. This includes cooking, bathing, clothes drying and dishwashing.

#### WATER HEATING & LAUNDRY

Don't overload the dryer. Overloading makes the dryer work harder and may cause excessive lint and wrinkling.

Dry loads consecutively to take advantage of heat build-up in your dryer.

Remove clothes as soon as they are dry. This not only saves energy but also helps to prevent wrinkling.

Your dishes should not need rinsing before putting them in the dishwasher, but if you do, use cold water instead of hot.

#### WEATHERIZATION

Heavy curtains or the use of window quilts will help reduce heat loss at night during the heating season. When the sun is shining, open the covering and allow the sun to help heat the room.

During the heating season, keep window shades open during the day to benefit from the heat of the sun. Close the window shades at night to keep the heat in.

#### LIGHTING

The money you spend on light bulbs is only 5-10 percent of your total lighting costs. The other 90-95 percent is the cost of electricity. Energy efficient compact fluorescent lights cost more to purchase, but only use about one fourth the energy to supply the same amount of light.

Take advantage of daylight whenever possible and turn off unneeded lighting. Fixtures with photocells and motion detectors are an excellent way to save on your lighting costs.

Use dimmers to control the amount of light you need. Dimming the lights to half the illumination cuts energy consumption roughly in half. (Note: For compact fluorescent lights, use only bulbs that are rated for use with dimmers.)

Look for the ENERGY STAR label on light bulbs and light fixtures. These models save energy, and money, and help the environment.

#### MISCELLANEOUS

If you are thinking about purchasing a new TV or VCR, look for ENERGY STAR models. These energy efficient models save money and help protect the environment by using less energy.

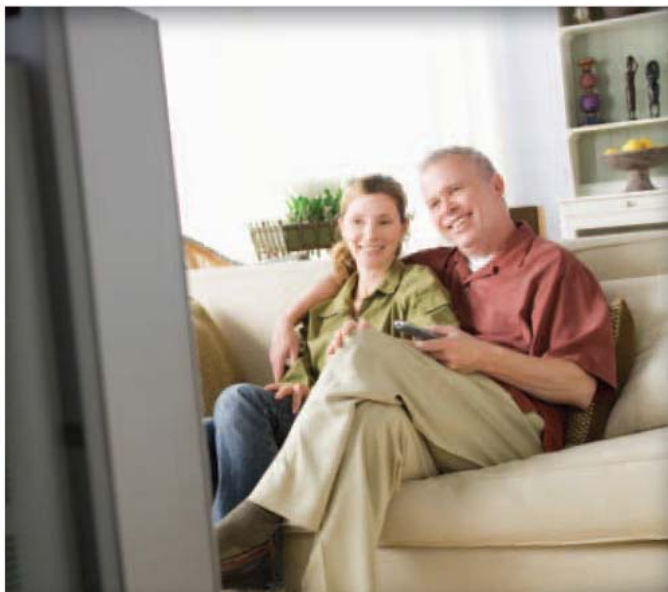
Computers and monitors qualify for an ENERGY STAR rating if they have a low energy "sleep" mode when not in use. If your computer has this feature make sure that it is enabled. Of course, you can save even more energy by turning these items off.

Screen savers, while effective in preserving the monitor, actually don't save energy. The best way to preserve the monitor and save energy is to turn it off.

## Residential Energy Assessments

HEHC Brochure

SAVE SOME GREEN  
WITH A HOME ENERGY HOUSE CALL



# Residential Energy Assessments

## REDUCE YOUR ENERGY BILL

Home Energy House Call is a free in-home energy assessment designed to help you learn how your home uses energy and how you can save on your monthly bills. The program provides personalized information unique to your home and energy practices.

An energy specialist will visit your home to

- Pinpoint potential energy problems in your home at no cost to you
- Explain how to improve the heating and cooling comfort level of your home
- Help you preserve the environment for the future and keep electric costs low
- Provide you with a free Energy Efficiency Starter Kit



From the energy specialist's observations, a customized report is prepared detailing steps you can take to increase efficiency and reduce your energy bill.

### RECEIVE FREE ENERGY SAVING ITEMS

As a part of your Home Energy House Call, you will receive a free Energy Efficiency Starter Kit. At your request, the energy specialist can install the efficiency items so that you can begin saving right away.

### TO QUALIFY, YOU MUST

- Be a Duke Energy residential customer in North or South Carolina
- Have one of the following: electric heat, electric water heater or central air
- Own a single-family home and have lived there for at least four months (rental properties and mobile homes do not qualify)

### START SAVING TODAY!

To sign up for your free Home Energy House Call, use one of the following methods

- Visit us online at [www.duke-energy.com](http://www.duke-energy.com)
- Call 1-877-388-7676 (toll free)
- Complete and return the postage-paid reply card

\*Items in actual kit may differ slightly from those shown in photo.

## MAKE A DIFFERENCE

### WORKING TOGETHER FOR A BETTER TOMORROW

By the year 2030, demand for electricity in the United States is expected to grow by approximately 25 percent, according to U.S. Department of Energy forecasts. In addition to developing nuclear and advanced cleaner-coal power plants, Duke Energy is leading the way by pursuing clean, renewable energy sources and helping you save energy through innovative efficiency programs. By carefully balancing all of these sources, we can meet our goal of providing you with reliable and affordable energy.

With energy efficiency programs such as Home Energy House Call, Duke Energy is helping you lower your energy consumption, and your energy savings helps us to meet the growing need for electricity. By participating in Home Energy House Call, you help preserve the environment, conserve energy and lower your bill.

Working together, we can reduce your energy consumption and contribute to a better tomorrow for all!

NO POSTAGE  
NECESSARY IF  
MAILED IN THE  
UNITED STATES



**BUSINESS REPLY MAIL**

FIRST-CLASS MAIL PERMIT NO 1930 DULUTH MN

POSTAGE WILL BE PAID BY ADDRESSEE

ATTN HOME ENERGY HOUSE CALL  
DUKE ENERGY  
1 E 1ST ST STE 300  
DULUTH MN 55802-9951



# Residential Energy Assessments

## SIGN UP TODAY

### TO QUALIFY, YOU MUST

- Be a Duke Energy residential customer in North or South Carolina
- Have one of the following: electric heat, electric water heater or central air
- Own a single-family home and have lived there for at least four months (rental properties and mobile homes do not qualify)

Name on Account \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Daytime Phone \_\_\_\_\_

Evening Phone \_\_\_\_\_

County of Residence \_\_\_\_\_

Account Number \_\_\_\_\_

**VISIT [WWW.DUKE-ENERGY.COM](http://WWW.DUKE-ENERGY.COM) TO SIGN UP OR CALL 1-877-388-7676 (TOLL FREE) OR RETURN THIS CARD.**

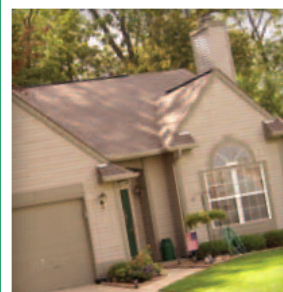
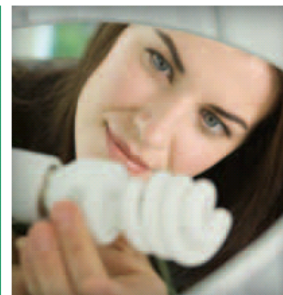
## EXPERIENCE THE BENEFITS

- A trained Energy Specialist will look for energy issues in your home at no cost to you
- Learn how you can improve your home and save energy with a customized report
- Improve the comfort of your home
- Receive a free Energy Efficiency Starter Kit
- Help preserve the environment for the future and keep electric costs low



**Mixed Sources**  
Product group from well-managed forests, controlled sources and recycled wood or fiber  
[www.fsc.org](http://www.fsc.org) Cert no. X20-COC-006  
© 1996 Forest Stewardship Council

080099 – Carolinas – Revised 5/09



EY573 / 139 East Fourth Street  
Cincinnati, OH 45202

PRSR STD  
US POSTAGE  
**PAID**  
DUKE ENERGY

Carolinas

CHE



# Residential Energy Assessments

## HEHC On-Site Report

	<b>HOME ENERGY HOUSE CALL ONSITE REPORT</b>		
Customer Name _____			
State _____ Account # _____ Date _____ Home Size _____			
1. <b>Home shell insulation.</b> Home insulation helps keep heated or air conditioned air from getting out of your home. Your home insulation needs: a) none, b) attic, c) wall cavity, d) basement wall insulation, e) floor insulation or insulation around the perimeter of the crawl space.			
2. <b>Home shell air tightness.</b> Air leaks in your home allow conditioned air to escape and outside air to invade your home. Your home sealing needs: a) none, b) seal leaky windows c) seal leaky doors, d) seal leaky fireplace, e) seal leaky attic access, f) seal leaky plumbing, electrical, ceiling lights or other openings in shell, g) a major source of outside air infiltration was discovered and should be sealed.			
3. <b>Duct insulation.</b> If your heating/cooling duct system is outside of your home's heated or cooled space, the ducts need to be well insulated to R-19. Your duct insulation needs: a) no action, b) attic duct insulation, c) garage duct insulation, d) crawl space or basement ducts or insulate perimeter walls and seal space.			
4. <b>Duct air tightness.</b> Heating and cooling duct systems should be relatively airtight, especially if the duct system is not located in your home's heated or cooled space. Your duct sealing needs: a) no action b) attic ducts sealed, c) garage ducts sealed, d) a major duct repair is needed to seal your system.			
5. <b>Heat pump condition.</b> An electric heat pump is very energy efficient. Your heat pump appears to be: a) high efficiency, b) an acceptable age and working, c) could not test heat pump to see if it is working, d) appears to be an acceptable age but may need to be serviced, e) appears to be old or you have no heat pump now. Installing a new heat pump will give you significant energy savings.			
6. <b>Furnace filter.</b> A dirty furnace filter can reduce your heating and cooling efficiency. Your furnace filter: a) appears acceptable, b) needs attention. (Needs cleaned or replaced or the filter area needs repair.)			
7. <b>Crawl space vents.</b> Your crawl space or basement vents should be closed during the winter heating season. Your home: a) has no crawl space, no crawl space vents or vents are always closed, b) consider closing vents in summer, c) close vents in winter, d) a significant crawl space or basement sealing repair is needed.			
8. <b>Summer window shading.</b> Air conditioning costs can double if direct sunlight is not blocked. When air conditioning is on: a) window coverings are usually fully drawn or you have no air conditioning, b) window shades half drawn, c) shading rarely used, d) significant east/west, un-shaded solar exposure.			
9. <b>Furnace fan run time.</b> Running your furnace fan all the time may increase your comfort, but it also adds to your electric bill. Your furnace fan is: a) you have no central fan b) ECM fan, c) always set to "auto" (cycling off and on) d) set to "auto" half the time and "on" half the time, e) always set to "on".			
10. <b>Hot water.</b> Do not overheat your water. Today's laundry detergents allow for energy savings by using cold water for the wash and rinse cycles in your clothes washer. For your laundry: a) reduce your water heater temperature to 120 degrees, b) all washing and rinsing is in cold water, c) change wash loads from hot to warm or cold, d) change rinse loads from hot to cold.			
11. <b>Extra refrigerator.</b> If your second refrigerator is not needed in all seasons, unplugging it or removing it will save you energy and money. In your home: a) you have only one refrigerator, b) consider unplugging your extra refrigerator.			
OR0097 - Revised 10/08			

## Residential Smart Saver®

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### A. Description

The Residential Smart Saver® Energy Efficiency Program is an energy conservation program in North Carolina and South Carolina where incentives are paid to residential customers.

#### CFLs

This program is designed to offer incentives to customers and increase energy efficiency by installing CFLs in high use fixtures in the home. The incentives were offered in a variety of ways, including but not limited to “free” coupons, business reply cards (BRC) and IVR/WEB/OLS on-demand ordering tool. The new channels allowed us to increase impacts, encourage our customers to become more energy efficient and lower program costs. The benefits include being

- easier for the customer to participate
- able to manage inventory demand
- able to simplify coordination of the program
- able to realize results on a quicker timeline

Examples of recent channels include:

1. **GE/Wal-Mart Coupon** – Duke Energy (DE) mailed a “free” coupon to eligible residential customers which was redeemable at Wal-Mart. The offer was for a six pack of GE Energy Smart CFLs.
2. **BRC (Business Reply Card)** – Duke Energy mailed a business reply card to eligible customers to “opt-in” and request a free six pack of CFLs to ship directly to their homes at no additional cost. Each BRC contained a unique barcode to track requests to a Duke Energy account number. Kits were fulfilled by a 3<sup>rd</sup> party vendor and results were available within weeks of the order.
3. **IVR/WEB/OLS (CFL offer)** – Duke Energy currently provides eligible customers with three new channels options to request free CFLs to ship directly to their home at no additional cost:
  - a. The IVR (Interactive Voice Response) consists of a toll free phone number for Duke Energy customers to use for account validation and to determine how many bulbs they are eligible to order. Customers acknowledge the order and Duke Energy processes the file to be fulfilled by a 3<sup>rd</sup> party vendor. The file will go directly to the vendor (processed daily) to speed up the ordering process.
  - b. The WEB consists of screens that walk a customer through the CFL ordering process. Customers enter their account number or phone number plus last four digits of their social security number to check eligibility. Customers will then see how many bulbs they qualify for. They have the ability to accept or decline the order and then proceed to check out.
  - c. OLS (On line Services) customers (new and existing) will receive a “pop up” upon logging into OLS stating that they qualify for CFLs. They can choose to accept or decline. The same ordering process is identical to the WEB stated above. If an OLS customer declines upon logging into OLS, he / she will only see a “promo” box upon entering OLS during their next visit.

#### **HVAC and Heat Pump**

Incentives are paid to home builders, heating contractors and/or customers when high efficiency heat pumps or air conditioners are installed. The incentive is \$300 per installation and is designed to increase the efficiency of HVAC systems in new homes and for replacements in existing homes.



## Residential Smart Saver®

Duke Energy employs Wisconsin Energy Conservation Corporation (WECC) to promote and deliver several Duke Energy programs, including the Residential Smart Saver®. CustomerLink is another company that supports the program and is responsible for handling program related inquiries. WECC Representatives work closely with Trade Allies, such as heating contractors or builders, who are the direct interface with the residential customers. Once the home builder or customer decides to purchase a qualifying measure, an incentive application is prepared by the trade ally and sent to WECC. WECC receives and processes the incentive application from the trade ally and validates qualification. Once this is complete; they split incentive payments for existing homes are made by WECC to the heating dealer and customer. For new homes, the builder submits an application for a qualifying home and receives the entire \$300.

### Audience

#### CFL

Eligible customers are those Duke Energy Carolinas residential customers who are served on a residential rate schedule from the Company's retail distribution system. Duke Energy promotes each campaign through various marketing channels including direct mail, online advertising, bill insert, bill message, mass media, press release, the Duke Energy website and other social media channels.

#### HVAC

Eligible customers are those Duke Energy Carolinas residential customers living in existing or building new owner-occupied residences, condominiums or mobile homes.

### B & C. Impacts, Participants and Expenses\*

<i>\$ in millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
<b>SC Nominal Avoided Cost</b>	\$21.0	\$115.5	550%
<b>Program Costs**</b>	\$5.8	\$23.7	409%
<b>Energy Impact (kW)</b>	10,894	43,751	402%
<b>Energy Impact (kWh)</b>	79,662,163	464,293,288	583%
<b>Units</b>		7,788,241	

\* Numbers are rounded

\*\* Program costs as filed do not include M&V. Actual program costs do not include overheads.

\*\*\* Data in table represents program performance from February 2010 – December 2010.

#### CFL

The Residential Smart Saver CFL program participation increased due to new offers and distribution channels (e.g., GE/Wal-Mart "free" Coupon, BRC, IVR/WEB/OLS online ordering tool). All eligible Duke Energy customers were targeted for the new CFL offers including Low Income customers. The new channels offered an easier way for Duke Energy customers to participate in energy efficiency programs. Response rates increased from 1.3 percent (traditional discounted coupons provided in 2009) to approximately 28 percent overall for new offers/channels in 2010.

## Residential Smart Saver®

### Campaign Results Take Rate

#### 1. GE/Wal-Mart coupon offer \*

[CONFIDENTIAL]

State	# of Coupons Mailed	Total Coupons Redeemed	% Take Rate	Cost Per Bulb
NC	1,008,866	255,378	25.30%	
SC	290,343	76,163	26.21%	

\*Data in table represents Carolinas program performance from January 2010 – December 2010.

#### 2. Business Reply Card \*

[CONFIDENTIAL]

State	# of BRCs Mailed	Total BRCs Redeemed	% Take Rate	Cost Per Bulb
NC	597,853	223,158	37.26%	
SC	176,416	75,227	42.55%	

\*Data in table represents Carolinas program performance from January 2010 – December 2010.

#### 3. IVR/WEB/OLS ordering tool \*

[CONFIDENTIAL]

State	Total Orders	Total Bulbs	Cost Per Bulb
NC	217,260	2,860,570	
SC	73,418	961,172	

\*Data in table represents Carolinas program performance from January 2010 – December 2010.

### HVAC

Smart Saver Residential participation is higher than expected; however, as CFLs are the high volume measure of the Smart Saver program, the HVAC results are not easily identifiable in the numbers. Duke Energy more than tripled the expected participation of 4,001 heat pumps and air conditioners in 2010 and realized participation of 14,594. Variance from the estimated budget, participation and impacts are a result of greater than expected acceptance of the program by customers and participating trade allies. Another contribution to this success is the work done by WECC trade ally representatives in signing up approximately 580 participating trade allies in 2010 and over 880 trade allies since program start up in June 2009.

## D. Qualitative Analysis

### Highlights

## Residential Smart Saver®

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### CFL

Campaign success can be attributed to the no cost coupon offer by GE/Wal-Mart and the new channels offering “free” CFLs, which are delivered directly to the customer’s home. The BRC and IVR/WEB channels allowed a “hassle-free” opportunity for customers to participate in the CFL programs without redeeming a coupon. Customers simply returned the postage paid BRC or utilized the IVR/WEB channels to opt-in for the CFLs. Inventory issues were eliminated by working with a 3<sup>rd</sup> party vendor to stock CFLs in advance to meet demand. One highlight for the new IVR/WEB/OLS channels is the ability for customers to check eligibility, order CFLs, and track the status of their order; from requested date to delivery. The IVR/WEB/OLS channels allow Duke Energy to utilize low-cost, no-cost marketing channels to reach eligible customers who have not participated in traditional coupon offers. Total bulbs distributed through CFL campaigns exceeded 7.8 million bulbs in 2010.

### HVAC

One of the most important attributes to our success is the incentive given to our heating contractor or to the sales representative. This incentive motivates the sales person to pursue the high efficiency sale at every opportunity. It is also a fair compensation for the amount of time the sales representative has in completing the incentive application for the customer. Customers do not have the technical information we are requesting on the application form, so we ask the trade ally to do this for the customer. Another very important highlight of the program is the ability of the WECC trade ally representatives to be able to sign up almost every heating contractor doing business in the Duke Energy service territory. To date we have over 880 participating trade allies signed up in North Carolina and South Carolina.

### Issues

#### CFL

The GE/Wal-Mart coupon offer was very successful and the response rate was higher than anticipated. Managing inventory to meet the high demand during the first phase of the coupon mailing was a challenge. Although coupon mailings were staggered over several weeks, some stores depleted their inventory which created a less than ideal customer experience. Duke Energy worked with GE and Wal-Mart to quickly address the inventory issue. GE extended the expiration date of the coupon, offered substitute products, transferred inventory from other store locations and shipped additional products to meet demand. Addressing the inventory issues and extending the campaign expiration date allowed customers additional time to redeem coupons contributing to positive results.

### Potential Changes

#### CFL

1. **IVR/WEB/OLS (CFL offer)** – Duke Energy will continue to utilize the new channels available to eligible customers requesting free CFLs to ship directly to their homes at no additional cost. We will utilize new marketing channels to reach eligible customers in the Carolinas.
  - a. Additional marketing channels will consist of the following:
    - i. Earned Media (Print, Press Release, TV, Radio)
    - ii. Social Media (Twitter, Facebook, YouTube Video)
    - iii. Duke Energy Web site (State Landing Pages, Portal Story, OLS Promo boxes, Opt-in E-mail)

## Residential Smart Saver®

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- iv. Duke Energy Messaging Channels (Bill Messages, Bill Insert, Bill Envelopes)
- v. Print (Direct Mail piece, Event/Low Income Agency Postcard)

2. **Property Manager** – Duke Energy has selected Honeywell as the vendor to manage the distribution of CFLs to property managers. Honeywell will partner with North Carolina and South Carolina property managers to enroll multi-family complexes that will install CFLs. Duke Energy pays for the bulbs and the Property Manager pays for the shipping costs. The goal is to identify the number of units and permanent fixtures available with each apartment unit. Property Managers will install CFLs into the permanent fixture during their routine maintenance visits and provide tracking for each unit and the number of bulbs installed. Honeywell will validate and report the activity for each individual unit on the property.

### HVAC

Program enhancements currently being considered include developing an electronic application submission process to allow for easier, quicker and more efficient submission of customer applications. Additional measures are currently being developed that are complimentary to the Smart Saver® HVAC program. The new services would further incentivize customers to increase their home's efficiency of through measures such as attic insulation and air sealing, duct sealing, and HVAC tune ups.

## E. Marketing Strategy

### CFL

The overall strategy of this program is to reach residential Duke Energy customers who have not adopted the installation of CFLs. This is an easy and low cost way to become energy efficient without sacrificing comfort. We will continue to utilize new channels and educate customer on the benefits of CFLs while addressing barriers for consumers who have not purchased CFLs. The IVR/WEB CFL offer will use low/no cost channels to target DE customers. During the initial rollout, customers will hear about the offer through bill message, bill insert, e-mails Opt-in, internal employee communications; sponsorship programs/radio spots, tradeshow events and social media. As the program matures, additional channels will be utilized, such as, direct mail, e-mail and online advertising.

### HVAC

This program is promoted by Duke, WECC and CustomerLink directly to HVAC contractors, builders and homeowners with aging equipment. All heating contractors and new home builders are encouraged to go to the Smart Saver® Web site and complete the Heating Dealer and Builder Sign up Form. All Participating Heating Dealers and Builders are included in an online list of participating trade allies.

The overall strategy for this program is to reach customers who are in need of an HVAC system and most importantly, to have our offer presented at the exact time a customer is deciding between a standard efficiency or high efficiency system. By keeping in very close contact with most all the significant trade allies in our service territory, we believe this program is being offered to nearly all customers who are making this decision. Program information is available to heating dealers, builders and customers via

## Residential Smart Saver®

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our Web site. It is also available in a brochure that is offered from many sources. The text of this brochure is attached at the end of this document.

### F. Measurement and Verification

#### Evaluation, Measurement and Verification Schedule

##### CFL

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q3	Q2	Q4	Q2	Q4

##### HVAC

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q3	Q2	Q4	Q3	Q4

## Residential Smart Saver®

### Appendix



The coupon above is for the GE/Wal-Mart CFL offer. The coupon was mailed to 1,008,866 customers in North Carolina and 290,343 customers in South Carolina. The campaign ran from March 3, 2010 thru July 15, 2010. The offer was valid for a 'free' six pack of 13 watt CFLs.

## Residential Smart Saver®

**Save Energy And Money With FREE CFLs!**


When you say YES to our FREE six pack of CFLs, you can save on energy and its costs. By placing these ENERGY STAR® qualified bulbs in the six light fixtures you use most, you could save up to \$50 over the lifetime of the bulbs.

In addition your CFLs will use 75 percent less energy, generate 70 percent less heat and last up to 10 times longer than standard bulbs, which means you'll also spend less time and money replacing bulbs.

Just check YES and mail the postage paid card back to us today. There's no need to visit a store to redeem a coupon! Your CFLs will be mailed to your home within four to six weeks.

Try them on us and see how satisfied you'll be with their excellent quality plus energy savings. They're perfect for the most used areas of your home such as the kitchen, living room, recreation room and home office.

With our FREE offer, there's nothing to lose. So return the reply card today. Say YES to CFLs and start saving more on your energy bill.



**Unimpressed with CFLs? Try them Risk-Free on Us.**

Check out these myth busting realities about today's CFLs.

MYTH	REALITY
The light from CFLs is ugly.	Today's CFLs come in a wide range of colors, from soft white to daylight. The light is much more natural than older versions.
CFLs are unsafe because they contain mercury.	CFLs contain a very small amount of mercury – an average of four milligrams in each bulb (or about one percent of what's in older thermometers). No mercury is released when the bulbs are intact or in use.
CFLs flicker too much.	Earlier designs of CFLs did have a hum and flicker. Today's bulbs eliminate both.
CFLs take too long to warm up.	While CFLs do not start at full intensity like incandescent bulbs, nearly all turn on instantly and reach full illumination very quickly.

\*Duke Energy recommends cycling CFLs at the end of their life cycle. For more information about this offer or CFLs, visit [www.duke-energy.com/cfls](http://www.duke-energy.com/cfls).


[www.duke-energy.com](http://www.duke-energy.com)

☐ **YES, send me my free ENERGY STAR® qualified CFLs!**

Hurry, this offer expires July 9, 2010.

The CFL must be installed at the service location that corresponds to your Duke Energy account.



**[Barcode Area]**



**All kits contain:**

- 3 – 13-watt spiral bulbs (60-watt equivalent)
- 3 – 20-watt spiral bulbs (75-watt equivalent)

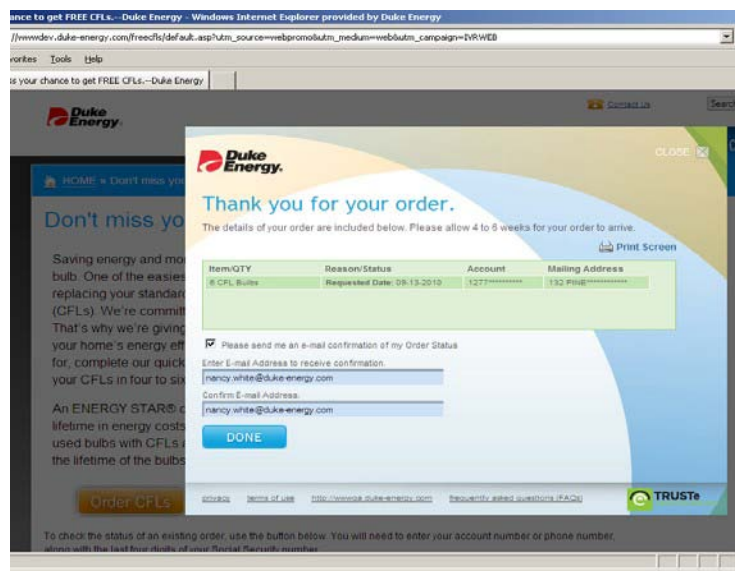
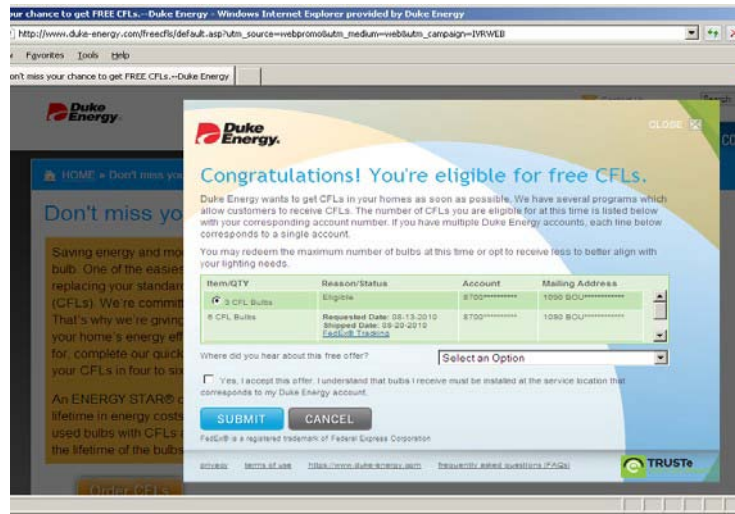
Duke Energy and its associated logo are registered trademarks of Duke Energy Corporation. ENERGY STAR® and the ENERGY STAR® logo are registered trademarks of the U.S. Environmental Protection Agency.

The Business Reply Card (BRC) was mailed to 597,853 customers in North Carolina and 176,416 customers in South Carolina. The campaign ran from June 1 thru July 16, 2010. The offer was valid for a six pack of CFLs (three - 13 watt and three - 20 watt CFLs).



# Residential Smart Saver®





## Residential Smart Saver®

### IVR/Web/Online Services Tool

- Has on-demand ordering and fulfillment capability
- Provides ability to check eligibility, place orders, and track order status
- Officially launched on November 2 in North Carolina
- Total bulbs orders for North Carolina - 2,860,510; Total bulbs ordered in South Carolina - 961,172



Duke Energy Customers Can Receive  
**FREE Energy Efficient Bulbs**



**We'll Ship Them Direct To Your Home – No Obligation!**

At Duke Energy, we want everyone to learn how new, energy-saving bulbs can save a lot in the long run. So, we'll send you FREE bulbs to try for yourself with absolutely no obligation or risk.

These new bulbs:

- Last up to 10 times longer than a standard bulb. That means you'll replace bulbs far less often.
- Provide the same amount of light as a standard bulb but use about 75 percent less energy.
- Can help you save on your electric bill – about \$30 over the lifetime of each bulb.

**TO SEE IF YOU'RE ELIGIBLE FOR FREE BULBS,  
CALL 1-800-943-7585 and press Option 1.  
Or visit [www.duke-energy.com/freecfls](http://www.duke-energy.com/freecfls).**

We look forward to sending you your FREE bulbs!

0020-08 CFL\_lowIncome\_postcard 2.pdf 2 1/24/11 4:27 PM



### Energy-Saving Bulbs Are A Bright Idea

Today's energy-saving bulbs have come a long way from earlier models and provide high-quality, warm white light and no buzzing.

**Don't wait for existing bulbs to burn out. Get your free bulbs and start saving now.**

- Here's how:
- 1** To get your free bulbs, call 1-800-943-7585 or visit [www.duke-energy.com/freecfls](http://www.duke-energy.com/freecfls).
  - 2** Install your energy-saving bulbs in the most frequently used areas of your home.
  - 3** Enjoy the savings on your electric bill!

See if you are eligible now. Order your bulbs in less than five minutes!

\*\*Above is the 'draft' of the Low Income/Event Postcard that will be distributed during 2011 for the IVR/WEB campaign.

## Residential Smart Saver®

Brochure text for HVAC / Heat Pump:

### RECEIVE A REBATE AND SAVE ON YOUR ENERGY BILL

#### SMART SAVER™ PROGRAM FOR EXISTING & NEW HOMES

Duke Energy encourages you to take advantage of our Smart Saver Program, which provides you an immediate rebate when you invest in a high efficiency heating or cooling system. And, with a high efficiency system, you'll experience savings on your home energy bills for years to come.

There are many new features in today's high efficiency heat pumps and air conditioners. This new technology will not only save you energy but it will also provide you greater comfort in your home.

By choosing a high efficiency system, you are helping to reduce our nation's need for energy, promote a clean environment and save valuable energy resources – now and in the future. You can find more information about Smart Saver, other energy efficiency programs, and ways to save energy and money at [www.duke-energy.com/savings](http://www.duke-energy.com/savings).

#### SMART SAVER REBATES\*

You may qualify for a rebate in your existing home when you replace your heating and/or cooling system. New homes may also qualify when a new high efficiency heating and cooling system is selected. Choose a qualifying high efficiency air conditioner or heat pump listed in the chart below.

Type of high efficiency heating or cooling system	Rebate amount to customer in an existing home	Rebate amount to builder of a new home**
New 14 SEER or greater air conditioner with ECM fan	\$200	\$300
New 14 SEER or greater heat pump with ECM fan. Heat Pump HSPF must be an 8.2 or greater.	\$200	\$300
New 11.5 EER or greater geo thermal heat pump with ECM Fan	\$200	\$300

\* Rebates are paid for each qualifying system if more than one system is used in the home.

\*\* For new homes, rebates are made to the builder unless the builder agrees that the customer will receive the rebate.

#### SMART SAVER FREQUENTLY ASKED QUESTIONS **How do I**

##### **qualify for the Smart Saver rebates?**

Smart Saver rebates are available for Duke Energy customers who purchase a new high efficiency heat pump or air conditioner. Heat pumps and air conditioners must also be equipped with a high efficiency fan motor (ECM). The qualifying efficiencies are listed in the rebate table above.

##### **Why should I consider spending more on a high efficiency system?**

Your new air conditioner or heat pump is an important investment for your home. You can expect this new system to last about 15 years and many systems last even longer. Investing in more efficient technology now will help keep your energy bills lower for years to come.

##### **What is a SEER or EER?**

These are energy efficiency ratings to help consumers compare efficiency levels between all the available air conditioners and heat pumps. The higher the number, the less energy the system uses. The SEER or

## Residential Smart Saver®

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EER rating provided by your installer should be certified by the Air-Conditioning and Refrigeration Institute (ARI).

### **What is HSPF?**

This is an energy efficiency rating for heat pumps. The higher the number, the less energy the system uses while heating your home.

### **What is an ECM fan?**

Most all heating and cooling systems use a fan to distribute the heating or air conditioning to all the rooms in your home. This is also referred to as the blower. The type of fan motor should be considered in the total energy required to heat and cool your home, as it can be a considerable expense on your energy bill. Today's new efficient fan motors are referred to as "ECM", which stands for Electronically Commutative Motor. Many people simply refer to these new motors as a "variable speed fan" but the ECM specification is required. In addition to saving you money, this new technology is quieter than traditional fan motors and will increase your family's comfort in many ways. Ask your heating contractor for more details.

### **I do not have a heat pump now. Should I consider one?**

Yes. When it's time to replace your central air conditioner, you can instead choose an add-on heat pump to significantly lower your monthly energy costs. In addition to providing energy efficient cooling in the summer, there is no heating technology that is more efficient than a heat pump during most winter temperatures. In a "dual-fuel" system, where an electric heat pump works in conjunction with a gas or oil furnace, the more efficient heat pump is used for 60% to 75% or more of your total heating load, and your furnace is used only on the coldest days.

## Low Income Energy Efficiency and Weatherization Assistance

### A. Description

The purpose of the Low Income Energy Efficiency and Weatherization Assistance Program is to assist low income customers with energy efficiency measures to reduce home energy usage. There are three separate offerings currently in the program: weatherization, refrigerator replacement, and the agency assistance kit.

Weatherization and Equipment Replacement Assistance is available for up to 5,000 qualified customers on the Duke Energy Carolinas' system in existing, individually metered, owner-occupied single-family, all-electric residences, condominiums, and mobile homes.

- Funds are available for (i.) weatherization measures, and/or (ii.) refrigerator replacement with an Energy Star appliance, and/or (iii.) heating system replacement with a 14 or greater SEER heat pump. The measures eligible for funding will be determined by an energy audit of the residence.
- A home energy audit will be provided at no charge to the customer.
- Participants are not eligible for payments under any other Duke Energy Carolinas Energy Efficiency Program for the same energy efficiency measure provided under this program.

The Agency Assistance Kit provides products to qualified customers, such as energy efficiency starter kits and compact fluorescent light bulbs, not to exceed \$30.00 in value. The program is available to customers in existing, individually metered, residences, condominiums, apartments and mobile homes. Duke Energy Carolinas partners with local assistance agencies as the avenue to reach customers. Local assistance agencies submit an energy survey via a web based portal, Agency Assistance Portal. Duke Energy currently has over 150 agencies set up to complete surveys in the Carolinas. For completion of the survey, the customer and agency is eligible to receive an incentive. Eligible customers who complete the energy survey are mailed 12 compact florescent light bulbs. The local assistance agencies receive a monetary incentive for each completed survey.

### Audience

#### Weatherization and Refrigerator Replacement

Availability of this program will be coordinated through local agencies that administer the state's weatherization program. These agencies must certify that the household income of the participant is between 150% and 200% of the federal poverty level.

#### Agency Assistance Kit

Any customer eligible for agency assistance may participate in the program.

### B & C. Impacts, Participants and Expenses\*

<i>\$ in millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
SC Nominal Avoided Cost	\$8.7	\$1.7	20%
Program Costs**	\$2.7	\$0.4	15%
Energy Impact (kW)	4,725	666	14%
Energy Impact (kWh)	35,318,559	7,183,049	20%
Units		10,197	

\* Numbers rounded

\*\* Program costs as filed exclude M&V. Actual program costs do not include overheads.

\*\*\*Data in table represents program performance from February 2010 – December 2010.

## Low Income Energy Efficiency and Weatherization Assistance

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The Weatherization and Refrigerator Replacement Program did not report any program participation or impacts because implementation was delayed. The huge increase in stimulus funding in the Carolinas and the change in qualifications made it difficult to incorporate the Duke Energy program into the expanded operations. The low income agencies in North Carolina and South Carolina requested that Duke Energy Carolinas delay the rollout until after stimulus funding expired. The programs have not incurred any expense since programs did not launch.

The number of agency assistance program participants has been significantly lower than projected. Low participation is due to several factors. The rollout of the program was implemented in a phased approach so the adoption was slower than anticipated. Duke Energy continued to work with local assistance agencies to increase program participation, but the agencies had a difficult time incorporating the added step into their process without increasing average customer handle time. The initial projections were overly optimistic and were developed before the current economic downturn. The economic downturn has increased the number of assistance requests at the agencies which forced many agencies to streamline operations to handle additional customers.

### D. Qualitative Analysis

#### Issues

Duke Energy's rollout plan includes coordinating the Weatherization Program through local agencies that administer the state Weatherization Program. The objective of the Duke Energy Carolinas' filed weatherization model includes complementing work being done with the existing weatherization network. Since the approval of Save-A-Watt, several major changes have occurred with the state's Weatherization Program. With such a substantial increase in funding, the opportunity for Duke Energy to complement the state's program has been impacted.

With an increase in weatherization funding from the Department of Energy (DOE), the existing state program must undergo more complex requirements to provide services to eligible customers. The American Recovery and Reinvestment Act (ARRA) stimulus dollars were released in 2009 and had the ability to be spent from that point through March 2012. With the approval of ARRA funding, the state weatherization funding has increased by over 500% from traditional funding levels. Due to such a significant increase in funding, the opportunity and need to "piggyback" the existing network is limited.

Duke Energy continues to communicate with state contacts from both NC and SC to identify opportunities to implement Duke Energy Carolinas income-qualified weatherization programs. The feedback from both states requested that Duke Energy delay the launch of programs until after March 2012 when ARRA funds expire.

Other challenges involving program implementation include the following components:

- ARRA presents additional challenges related to reporting as well as challenges that deal with requirements for both local and state agencies. Because of Duke Energy Carolinas restrictions in filing, weatherization agencies could only piggyback Duke Energy Carolinas program measures in total electric homes. This stipulation adds a level of complexity when measures can't be installed in all Duke Energy homes regardless of the energy source.

## Low Income Energy Efficiency and Weatherization Assistance

- Duke Energy's customer eligibility for program participation is not consistent with the eligibility of the state's weatherization program. This impacts the qualification process for Duke Energy program participants. The income eligibility for state funded weatherization applies to all customers up to 200% of the federal poverty level. Duke Energy's current program eligibility applies to all-electric homes which are owner occupied between 150% and 200% of the federal poverty level. To reduce complexity, Duke Energy Carolinas plans to align customer eligibility with state requirements.

For agency assistance kits, local assistance agencies have been slow to adopt the offering of survey completion to eligible customers. Due to the economic downturn, the number of customers visiting local assistance agencies has increased. Some agencies have reported a 200% increase in client visits. Duke Energy continues to explore avenues to increase program participation for low income customers. With the implementation of the IVR/Web CFL program, customers may request CFLs, track their order and determine the number of bulbs they are eligible to receive from the comfort of their home. This channel was implemented in fourth quarter of 2010 and demonstrated wide adoption to all segments including income qualified customers. In 2010, the non-low income CFL distribution channels reached over 300,000 low income customers.

### **Potential Changes**

Duke Energy continues to evaluate opportunities to provide new offerings to low income customers in the most cost effective manner. Duke Energy plans to provide notification to discontinue offering the agency assistance kits. The offering of CFLs via the IVR/Web channel has reached more low income customers than the Low Income CFL program. The IVR/Web offering is a more cost effective avenue to reach low income customers.

Duke Energy plans to file for a new Low Income Neighborhood program. This program will target neighborhoods where the majority of the residents are below 200% of the federal poverty guidelines. This Low Income Neighborhood program is being modeled after a program currently offered by Progress Energy.

### **E. Marketing Strategy**

Customer participation is achieved by working with local assistance agencies. All marketing of the program is conducted by each local assistance agency who offers the program to eligible customers. Some agencies offer the program to each client while others provide signage promoting the program. Appendix A includes an example of information shown by a local assistance agency promoting the program. This information is presented on wide screen monitors located in the lobby of the agency.

### **F. Measurement and Verification**

#### **Evaluation, Measurement & Verification Schedule**

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q4	Q4	Q1	Q4	Q3	Q3

## Low Income Energy Efficiency and Weatherization Assistance

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### Appendix A

Low Income CFL Promotion Material



### FREE COMPACT FLUORESCENT LIGHT BULBS (CFLs) HELP YOU SAVE\*



**Duke Energy wants to help you increase your home's energy efficiency!**

*Complete our Home Energy Survey to receive 12 FREE CFLs by mail.*

- Look for a Duke Energy representative in the lobby to assist you.

Use your bulbs to save \$55 off your annual energy bill.

- Replace the bulbs in your most used fixtures for maximum savings.
- With longer-lasting CFLs, you can go years without buying or changing light bulbs!

*\*You must be a Duke Energy customer to qualify.*

[www.duke-energy.com](http://www.duke-energy.com)

## Energy Efficiency Education Program for Schools

### A. Description

The Energy Efficiency Education Program for Schools is an energy conservation program available in NC and SC. The program currently focuses on third and fourth grade students with select schools participating in a pilot for kindergarten and first grade. The program educates students on energy efficiency in homes and schools through innovative lessons based upon science and math related curriculum. Education materials focus on concepts, such as renewable fuels and energy conservation and include interactive activities, such as online home audits that engage families in the learning experience. Students may also assist in assignments such as conducting energy assessments of their schools.

Duke Energy partnered with Scholastic to develop the curriculum and to promote and deliver the program to schools, teachers and families. Scholastic employs other third party vendors to assist in data and customer service management operations.

### Audience

Eligible participants are residential customers that have students enrolled in K12 public and private schools and reside in households served by Duke Energy Carolinas. Each eligible student who completes a home energy survey will receive energy efficiency measures in an energy efficiency starter kit. Similarly, through student and family participation, students' classrooms are eligible to receive additional educational incentives such as school science lab kits or science books.

### B & C. Impacts, Participants and Expenses\*

<i>\$ in millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
<b>SC Nominal Avoided Cost</b>	\$13.7	\$2.1	15%
<b>Program Cost**</b>	\$4.0	\$2.0	50%
<b>Energy Impact kW</b>	8,138	1,158	14%
<b>Energy Impact kWh</b>	50,547,245	6,240,039	12%
<b>Units</b>		19,908	

\* Numbers rounded

\*\*Program costs as filed do not include M&V. Actual program costs do not include overheads.

\*\*\* Data in table represents program performance from February 2010 – December 2010.

### Variance

The Energy Efficiency Education Program for Schools incurred significant start up costs that covered initial curriculum development, printing and distribution of materials, the hiring of field personnel as well as general marketing and outreach. Due to circumstances such as delayed regulatory approvals for Duke Energy Carolinas, longer than anticipated adoption among schools, overall lower than expected participation and slow distribution of energy measures into the home, the programs impacts were not able to positively offset expenditures.

The negative variance versus our budgeted levels of participation and impacts are a result of low participation and distribution of energy measures. One contributing factor to the programs underachievement was the channel acquisition process that required the engagement of multiple



## Energy Efficiency Education Program for Schools

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audiences for program adoption. Despite positive feedback from teachers and focus groups (e.g. school administrators, teachers, families and students); the program struggled to effectively make it through the multi-level engagements required for success. However, as a result of extensive outreach and marketing efforts, several school districts are starting to adopt the program for district wide implementation, which should yield higher participation rates.

### D. Qualitative Analysis

#### Highlights

One of the most important attributes to our success is the multi-level engagement concept of the program. The program offers free educational resources to classrooms that benefit teachers, schools, students and families complete with incentive offerings at varying levels of participation. Both the relevance of the materials supporting state academic standards and ease of curriculum delivery makes it an attractive program for teachers to implement. Furthermore, parents can participate in their student's learning efforts through completing a home energy survey that provides tangible information to help families manage their energy usage. Another very important highlight of the program is the ability for Duke Energy to track, at the household level, impacts achieved from energy measures distributed into homes through data obtained from the home energy questionnaire found in the Energy Efficiency Starter Kits. Since January 2010 through December 2010, we had over 11,411 families participate in the program in the Carolinas.

As a result of the innovative approach to bringing energy efficiency education to schools, the program was recognized by the Association of Energy Service Professionals 2009 Spring Implementation Conference: The Secrets to Successful Energy Efficiency Program Implementation. E-Source also recognized Duke Energy for the development and implementation of this program as well.

#### Issues

Program challenges stem around customer acquisition through the school channel. Effective implementation requires multiple audience engagement (e.g. administrators, teachers, students and parents). It can be challenging to get obtain immediate adoption due to a variety of factors:

- different directives and priorities from school administrators
- curriculum flexibility among teachers to incorporate an optional program
- student enthusiasm
- awareness and buy-in from parents to complete the home energy surveys with their children

Other challenges involving program adoption included program components like

- The home energy survey. Feedback has suggested that families may not be as comfortable completing the survey due to its length and types of information required, such as an account number or last 4 digits of the account holder's social security number. The information requested was patterned from existing programs that had a survey component and required capturing similar customer data for market research and fulfillment purposes. However, the survey was perceived differently in the school channel. The survey was revised, eliminating the last 4 digits of the account holder's social security number, along with reducing the number of survey questions from 30 to 6. Thus far, survey participants have slightly increased in volume beginning in October 2010.

## Energy Efficiency Education Program for Schools

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- Rebranding the program during the initial launch due to issues surfacing under the original name. Therefore, as of June 2010, the program was re-launched under a newly trademarked name, “Power in Energy.”
- District adoption requires establishing relationships with varying levels of the education community and ensuring there is buy-in and awareness of the program’s offering before teachers can implement it. This type of networking and engagement take time to build. A top- down approach will maximize outreach.

### **Potential Changes**

The program is undergoing several enhancements to improve visibility in the school market place and generate greater teacher and family adoption. Those enhancements could include:

- Revising both (Duke Energy and Scholastic) supplemental Web sites, banner ads and creating blogs for teacher postings.
- Offering more teacher trainings; online and in-person.
- Modifying participant incentives.
- Implementing a robust marketing partnership with community organizations.
- Leveraging and building upon field coordinators’ educator/administrator networks for stronger marketing and promotion.
- Building an online reporting tool identifying county, district, school and teacher adoption rates. This tool will also hold household customer data, as well as those that may be disqualified for any reason.

### **E. Marketing Strategy**

This program is promoted primarily by Scholastic with Duke Energy involvement. Scholastic develops educational materials and direct mails the education kits to teachers within the targeted K12 grades of schools served within the Duke Energy Carolinas territory. The education materials are complete with all the necessary resources to immediately use for a full class. Additional marketing channels used include websites with educational links, games, contact information, state field coordinators for in-person training and program demonstrations, program pamphlets, brochures, trinket items and family take home materials.

The strategy for this program is to provide energy education to students attending a K12 Duke Energy school in NC or SC and to encourage installation energy efficiency measures in customer homes. Key components include:

- Improving Web sites and curriculum materials.
- Simplifying the survey component.
- Adding Banner and Multi-media ads.
- Leveraging Duke Energy Business/Community Relations network.
- Conducting more face to face field coordinator market outreach in schools and within education community.
- Developing stronger engagement/marketing to families.

## Energy Efficiency Education Program for Schools

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- Revising incentives to better influence the installation of measures.
- Streamlining operational processes.

By keeping the program all inclusive of these audiences, it aids in the sustainability of the program and its message.

Program information is available on our Web sites:

[www.duke-energy.com/kidswithenergy](http://www.duke-energy.com/kidswithenergy) and [www.scholastic.com/energysmart](http://www.scholastic.com/energysmart).

### F. Measurement and Verification


#### Evaluation, Measurement & Verification Schedule

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q3	Q2	Q2	Q2	Q3

# Energy Efficiency Education Program for Schools

## Appendix A

### Energy Efficiency Education Program Sample Education Materials



**A FREE Energy Efficiency Education Program for Grades 3–4**

Welcome to **Power in Energy™**, an exciting education program featuring *The Magic School Bus*. With this program, you and your students will discover the best ways to save energy.

You may recognize this program from last year, but a lot has changed. The most important change? Our name! **Power in Energy™** represents a new school year and a new opportunity for us to work together to help students learn the importance of energy efficiency.

Your FREE **Power in Energy™** education kit includes:





- Standards-based interactive lessons
- Hands-on classroom activities
- Family materials for at-home learning

Take advantage of this great program that was delivered to your school in the fall. With *The Magic School Bus*, you and your students will find the **Power in Energy™**!

Get FREE books for your classroom! Turn the page to find out more.

For FREE classroom resources and program materials, visit:  
[www.scholastic.com/powerinenergy](http://www.scholastic.com/powerinenergy)

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## Energy Efficiency Education Program for Schools

### Get free books for your classroom!

Inside your **Power in Energy™** kit, you will find valuable information that will help your students' families save energy.

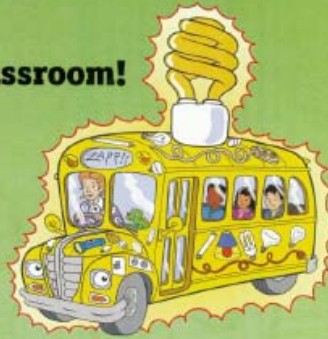
Get started by distributing the **Power in Energy™** Family Materials. These materials include a **Home Energy Survey** for families to fill out.

If just five of your students' families fill out and return the survey, you will receive a free class set of books from Scholastic.

In addition, families who return the survey will:

- **Receive a FREE Energy Efficiency Kit**
- **Learn how to reduce energy in the home**
- **Have a chance to win one of 20 iPads**

Encourage your students to participate today!



### There's More!

Visit our NEW Web site  
[www.scholastic.com/powerinenergy](http://www.scholastic.com/powerinenergy)  
to find additional tools and resources  
to help your students!

### Meet Your State Coordinator!



Get the most out of the **Power in Energy™** program. Your state coordinator can host assemblies, run workshops, and offer general program support for your classroom. Visit the Web site to find out more!



# Energy Efficiency Education Program for Schools



## Win Big With the Power in Energy<sup>SM</sup> Program!

**Attention Grade 3-4 Teachers:**  
Encourage your students to fill out their **Home Energy Surveys** and you will be eligible to **win one of 60 American Express gift cards valued at \$25 each!** Here's how it works:

- To be entered in the drawing, get 15 or more of your students to complete and return their **Home Energy Surveys** to Duke Energy by **December 31, 2010.**
- Copies of the survey are included in all **Power in Energy<sup>SM</sup>** kits, which were distributed to your school in the fall. The **Home Energy Survey** can also be filled out online at [www.powerinenergysurvey.com](http://www.powerinenergysurvey.com).

Send the survey home today to take advantage of this great opportunity for your classroom! Make sure your students put your full name on the survey.



**BONUS!**  
In addition to a chance to win an American Express gift card, all classrooms that complete and return at least five **Home Energy Surveys** will automatically receive a **FREE** set of books from Scholastic!



**Contact Your State Coordinator!**  
Questions about the **Power in Energy<sup>SM</sup>** program? Contact your state coordinator today!

**OHIO:**  
Michelle White  
[powerinenergyOH@scholastic.com](mailto:powerinenergyOH@scholastic.com)

**NORTH CAROLINA:**  
Alexandra Keirstead  
[powerinenergyNC@scholastic.com](mailto:powerinenergyNC@scholastic.com)


**SOUTH CAROLINA:**  
Emily Matthews  
[powerinenergySC@scholastic.com](mailto:powerinenergySC@scholastic.com)





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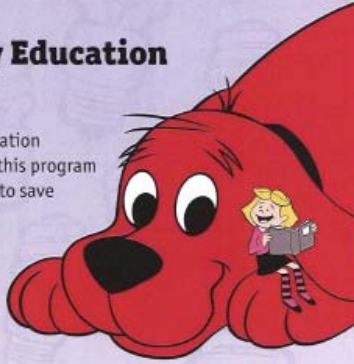
# Energy Efficiency Education Program for Schools



## A FREE Energy Efficiency Education Program for Grades K-1

Welcome to **Power in Energy**<sup>SM</sup>, a brand-new education program featuring Clifford the Big Red Dog! With this program you and your students will discover the best ways to save energy in the classroom and at home.

Created by Scholastic and Duke Energy, this standards-based program will teach your students the value of conserving energy while reinforcing important science and language arts skills and concepts.






**Your FREE **Power in Energy**<sup>SM</sup> education kit includes:**

- Standards-based interactive lessons
- Hands-on classroom activities
- Family materials for at-home learning

Take advantage of this great program that was **delivered to your school in the fall**. With Clifford, you and your students will find the **Power in Energy**<sup>SM</sup>!

**Get FREE books for your classroom! Turn the page to find out more.**



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## Energy Efficiency Education Program for Schools

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### Get free books for your classroom!

Inside your **Power in Energy<sup>SM</sup>** kit, you will find valuable information that will help your students' families save energy.

Get started by distributing the **Power in Energy<sup>SM</sup>** Family Materials. These materials include a **Home Energy Survey** for families to fill out.

If just five of your students' families fill out and return the survey, you will receive a FREE class set of books from Scholastic. In addition, families who return the survey will:

- Receive a **FREE Energy Efficiency Kit**
- Learn how to reduce energy in the home
- Have a chance to win one of 20 iPads

Encourage your students to participate today!



### Meet Your State Coordinator!

Get the most out of the **Power in Energy<sup>SM</sup>** program. Your state coordinator can host assemblies, run workshops, and offer general program support for your classroom.



## Power Manager®

### A. Description

The purpose of the Power Manager program is to reduce electric demand by cycling residential air conditioning usage during peak demand conditions in the summer months. The program is offered to residential customers with central air conditioning. Duke Energy installs a load cycling device to the outdoor unit of a customer's air conditioner. This enables the customer's air conditioner to be cycled off and on when the load on Duke Energy's system reaches peak levels. Customers receive financial incentives for participating in this program. The customer receives a yearly \$8 per month bill credit in the months of July through October for their program participation.

The cycling of the customer's air-conditioning system has shown that there is no adverse impact on the operation of the air-conditioning system. However, customers can opt out of the program if desired. The load control device has built-in safe guards to prevent the "short cycling" of the air-conditioning system. The air-conditioning system will always run the minimum amount of time required by the manufacturer. The cycling simply causes the air-conditioning system to run less, which is no different than what it does on milder days. Additionally, the indoor fan will continue to run and circulate air during the cycling event.

#### Audience

This program is available to North Carolina and South Carolina residential customers residing in owner-occupied, single-family residences with a functioning outdoor air conditioning unit.

### B & C. Impacts, Participants and Expenses\*

<i>\$ in millions</i>	Vintage 1 Filed	Vintage 1 Actual	% of Target
SC Nominal Avoided Cost	\$22.8	\$18.1	79%
SC Program Costs**	\$14.5	\$8.6	59%
SC Impact (kW)	305,553	231,882	76%
Units		238,769	

\* Numbers are rounded.

\*\* As-filed program costs do not include M&V. Actual program costs exclude overheads

\*\*\* Data in table represents program performance from February 2010 – December 2010.

#### Variance

As a result of lower than expected Power Manager enrollments, Duke Energy conducted customer research in early 2010. Results indicated three main drivers for the lack of enrollments: 1) the \$35 installation fee, 2) concern over loss of comfort, 3) environmental control and concern about the effect on their air conditioning equipment. The first two were the most-often cited reasons at forty percent (40%) and thirty-eight percent (38%) respectively. Marketing materials were changed to address these concerns. However, given the economy and the \$35 installation charge, new enrollments remain low, so acquisition has been minimized.

### D. Qualitative Analysis

## Power Manager®

### Highlights

Participants in the Power Manager program allow Duke Energy to control their air conditioners during peak summer demand periods. For their participation in the program, customers receive \$32 each year through an \$8 credit on their July – October bills. Credits are given whether or not a Power Manager event occurs.

The summer of 2010 was the first summer in which Power Manager was available in both North Carolina and South Carolina. Due to the extreme heat and subsequent high electric demand; Power Manager was activated on eight different days in the Carolinas. During these events, Duke Energy cycled customers' air conditioning units off and on, helping shift demand and lowers the peak.

### Issues

Given the low number of new enrollments, coupled with customers who left the program, customer participation declined from 179,000 to 176,000 in 2010.

Duke Energy is currently experiencing low response rates for signups. A survey was recently completed for the program. The survey's primary purpose is to determine why non-participating customers are not adopting the program and to make recommendations that can improve response rates. A significant barrier to participation is that customers pay a \$35 wiring charge after the device is installed for participation in the program.

### Potential Changes

To help increase the response rates for direct mail campaigns for the Power Manager program, Duke Energy will provide notification prior to removing the \$35 installation fee from the program. In addition, Duke Energy is in the process of redesigning the brochures to enhance the environmental message and reassure customers that the program is safe for their equipment. Duke Energy Carolinas will minimize customer acquisition activities until the offer can be improved to attract more customers.

Duke Energy will utilize a proven quality assurance process to aggressively evaluate the existing devices to determine the reliability. The low-performing devices will be repaired or replaced.

## **E. Marketing Strategy**

Direct mail marketing will be used when acquiring new customers for the program. Customers are targeted geographically, which allows for shorter customer wait time for installation and more efficient routes for the installers. Program information is also available to customers on the Power Manager Web site located at <http://www.duke-energy.com/north-carolina/savings/power-manager.asp>.

## **F. Measurement and Verification**

### **Evaluation, Measurement & Verification Schedule**

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q2	Q1	Q2	Q1	Q2

## Home Energy Comparison Report Pilot

### A. Description

The Home Energy Comparison Report (HECR) is a periodic comparative usage report that compares a customer's energy use to similar residences in the same geographical area. This report also gives customer specific energy saving recommendations to encourage energy saving behavior.

The reports are distributed in printed form up to 12 times per year (delivery may be interrupted during the off-peak energy usage months in the fall and spring.) The report's energy analysis content for each home is compared to the average energy use of neighbors in similar home types for the same period. Suggested energy efficiency improvements given the usage profile for that home are also provided. In addition, measure-specific coupons, rebates or audit follow-ups from other Company programs are offered to sample customers, based on the customer's energy profile.

### Audience

The audience is South Carolina customers identified through demographic information that is likely to decrease energy usage in response to the information contained in the HECR report. These customers reside in individually-metered, owner-occupied, single-family residences receiving concurrent service from the Company. Focusing on owner-occupied residences predisposes the report recipient to invest in energy- saving technology. Analyzing only single-family residences eliminates the possibility of erroneous data caused by thermal transfer between adjacent units in multi-family structures.

### B & C. Impacts, Participants and Expenses\*

<i>\$ in thousands</i>	<b>Vintage 1 Actual**</b>
<b>SC Nominal Avoided Cost</b>	<b>\$153</b>
<b>Program Cost<sup>1</sup></b>	<b>\$17</b>
<b>kW Impact</b>	<b>555</b>
<b>kWh Impact</b>	<b>2,991,111</b>
<b>Units</b>	<b>7,899</b>

\*Numbers rounded

\*\*This is a new pilot therefore there is no basis for comparison to as filed.

### D. Qualitative Analysis

#### Highlights

The preliminary six month results show approximately 2% overall savings for pilot participants. The savings are consistent with results achieved from other utilities instituting similar programs. Early results have shown that some participants have reduced overall consumption up to 25% while others have actually increased consumption. These preliminary results indicate that the pilot participants viewed the average home as a target level for consumption. Customers, who achieved a reduction in consumption, tended to live in homes that exhibited consumption higher than the average home. Those that increased consumption tended to be in homes that consumed less than the average home.

<sup>1</sup> Program cost is reflective of 7 months of program operations. Program costs do not include overheads.

## Home Energy Comparison Report Pilot

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### Issues

The Company has identified some pilot participants who increased their usage based on the average home being viewed. This is not the behavior that the Company wants to encourage with this Program.

### Potential Changes

The Company plans to file for full commercialization of the program in Q3 of 2011 in both North Carolina and South Carolina. Based on final results and analysis of the EM&V, the program will make changes. The preliminary recommended changes include exploring the option of a targeting approach which will allow messaging to target specific customers that may be savers or gainers. The Company will test messaging to determine opportunity to decrease consumption for all participants.

### E. Marketing Strategy

The marketing for the pilot consisted of proactive reports being distributed through direct mail. The Company is exploring the option of distributing reports via email.

### F. Measurement and Verification

#### EM&V Schedule

Estimated 2011 Process Reporting	Estimated 2011 Impact Reporting	Estimated 2012 Process Reporting	Estimated 2012 Impact Reporting	Estimated 2013 Process Reporting	Estimated 2013 Impact Reporting
Q2	Q3	Q3	Q1 – 2013	Q3	Q4

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

In re:	)	
	)	<b>DUKE ENERGY CAROLINAS,</b>
Application of Duke Energy Carolinas, LLC	)	<b>LLC'S REQUEST FOR APPROVAL</b>
For Approval of Rider 3	)	<b>OF RIDER 3</b>
	)	

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**Exhibit D**

**List of Changes**

**From Initial Application**

### **EXHIBIT D -LIST OF REVISIONS**

<b><u>Reference</u></b>	<b><u>Initial Application</u></b>	<b><u>Revised Application</u></b>
Page 1		Inserted reason for revision.
Page 4, Residential Billing Factor Table	Residential Billing Factor for Rider 3 Prospective Component is 0.0857	Residential Billing Factor for Rider 3 <b>True-Up Component</b> is 0.0857
Page 4, Residential Billing Factor Table	Residential Billing Factor for Rider 3 True-Up Component is 0.2284	Residential Billing Factor for Rider 3 <b>Prospective Component</b> is 0.2284
List of Exhibits		Inserted "Revised" where applicable and Added Exhibit D.
Exhibit B Residential Line 2	Exhibit 9, Line 11	Exhibit 9, Line <b>9</b>
Exhibit B Non-Residential Line 1, 4, & 7	Exhibit 9, Line 21	Exhibit 9, Line <b>17</b>
Exhibit B Non-Residential Line 10	Exhibit 9, Line 26	Exhibit 9, Line <b>22</b>
Exhibit B Total Costs Lines 1, 4 & 7	Exhibit 9, Line 21	Exhibit 9, Line <b>17</b>
Exhibit B Total Costs Lines 10	Exhibit 9, Line 26	Exhibit 9, Line <b>22</b>
Exhibit 1 – Residential Column 3	Vintage 3 SC Retail Revenue Requirement	Vintage <b>1</b> SC Retail Revenue Requirement
Exhibit 1 – Line 25	Line 4 + Line 9, Line 21 + Line 24	<b>Line 19 + Line 24, Line 23 + Line 24</b>
Exhibit 4 footnote (1)	Col. A, Line 6 or 7/ Line 9	Col. A, <b>Line 8 or 9/ Line 11</b>
Exhibit 4 footnote (2)	Col. B, Line 6 + Line 7	Col. B, <b>Line 8 + Line 9</b>
Exhibit 4 footnote (3)	Col. A, Line 6 or 7/ Line 11	Col. A, <b>Line 8 or 9/ Line 13</b>
Exhibit 4 footnote (4)	Col. B, Line 6 or 7/ Col. C, Line 7	Col. B, <b>Line 8 or 9/ Col. C, Line 9</b>
Exhibit 5 – Line 9	Line 26	<b>Line 27</b>
Exhibit 5 – Line 12	Line 29	<b>Line 30</b>
Exhibit 6 – Line 17	Line 6 * .39176	<b>Line 16 * .39176</b>
Exhibit 9 – Line references	Line references – 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20,21, 22, 23, 24, 25, 26, 27, 28, <b>29, 30, 31, 32</b>	Line references – <b>4, 5</b> , 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20,21, 22, 23, 24, 25, 26, 27, 28
Exhibit 9 – Line 5	Line 5 + Line 6	<b>Line 3 + Line 4</b>
Exhibit 9 – Line 7	Line 7 * Line 8	<b>Line 5 * Line 6</b>
Exhibit 9 – Line 9	Line 9 + Line 10	<b>Line 7 + Line 8</b>
Exhibit 9 – Line 11	(Line 13/ Line 14)*100	<b>(Line 9/ Line 10)*100</b>
Exhibit 9 – Line 17	(Lines 16 through 19)* Line 20	<b>(Lines 12 through 15)* Line 16</b>

<b><u>Reference</u></b>	<b><u>Initial Application</u></b>	<b><u>Revised Application</u></b>
Exhibit 9 – Line 20	Line 22 * Line 23	Line 18 * Line 19
Exhibit 9 – Line 22	Line 24 + Line 25	Line 20 + Line 21
Exhibit 9 – Line 27	Line 21/(Applicable Sales from Lines 27 through 29)* 100	Line 17/(Applicable Sales from Lines 23 through 26)* 100
Exhibit 9 – Line 28	Line 26/ Line 30 * 100	Line 22/ Line 26 * 100
Exhibit 11 – Line 30	Line 20, Line 2	Line 13, Line 2

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA**

**DOCKET NO. 2011-420-E**

In re:	)	
	)	
Application of Duke Energy Carolinas, LLC	)	<b>CERTIFICATE OF SERVICE</b>
For Approval of Rider 3	)	
	)	

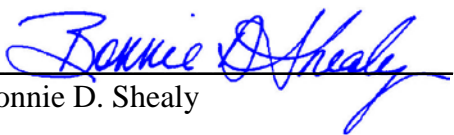
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This is to certify that I, Bonnie D. Shealy, an attorney with the law firm of Robinson, McFadden & Moore, P.C., have this day caused to be served upon the person(s) named below the **Duke Energy Carolinas, LLC's Revised Application for Approval of Rider 3** in the foregoing matter by placing a copy of same in the United States Mail, postage prepaid, in an envelope addressed as follows:

Shannon Bowyer Hudson, Attorney (Confidential Version)  
Office of Regulatory Staff  
1401 Main Street, Suite 900  
Columbia, SC 29201

James B. Holman, IV, Esquire (Public Version)  
Southern Environmental Law Center  
43 Broad St., Suite 300  
Charleston, SC 29401

Dated at Columbia, South Carolina this 20<sup>th</sup> day of December, 2011.

  
\_\_\_\_\_  
Bonnie D. Shealy